MINISTRY OF NATIONAL PLANNING

Second Four-Year Plan

FOR

The Union of Burma

(1961-62 to 1964-65)

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CHAPTER I

A REVIEW OF FORMER PLANS

1. Efforts at economic planning in Burma date back to pre-independence days when Bogyoke Aung San convened the Sorrento Villa Conference in June 1947 to discuss the problems of rehabilitation of the Burmese economy to its pre-war level. State assassinations interrupted the work however and it was only in April 1948 that a Two-Year Plan of Econonic Development was announced. The Plan provided for (1) the maximum development which Government considered practicable during the next two years and (2) laying the foundation of a planned economy.

Two-Year Plan

2. In the field of agriculture, the Two-Year Plan enunciated the three-fold policy of the Government (1) to redistribute land, (2) to secure a fair share to cultivators and (3) to restore the country's pre-war position as an exporter of rice and become self-sufficient in other agricultural crops. In the forestry sector, the Plan envisaged, in addition to nationalization, State control over milling and export. In industrial development the Two-Year Plan advocated a strongly socialistic policy. All basic industries were to be established and developed by State enterprise and even in regard to consumer goods industries "first consideration was to be given to their development on a State-owned basis". A strong emphasis was also placed on the encouragement of cottage industries "to provide the agriculturists with a valuable source of supplementary income and employment during the off-season". The Plan also called for the restoration of pre-war capacities of means of transportation and communication.

3. To sum up, the Two-Year Plan of Economic Development of Burma, admittedly handicapped by inadequacy of data and knowledge of the country's resources, was not a full-fledged plan in the true sense of the word. It was more of an enunciation of the economic aspirations of a newly born State and of the economic principles to guide the process of advancement towards those objectives. True, there was some mention of physical targets for agricultural production but there were no measures put forward as a means of achieving them. In the field of industry a number of desirable projects were enumerated but they were not backed by any technical studies or cost-benefit calculations. Still in other fields either only general objectives were mentioned or a number of concrete but somewhat uncorrelated measures were cited. Moreover, there was no financial framework for the plan as a whole and no attempt was made to fit the Plan into the Government budget. National income accounting was yet to be attempted. The Plan of course was never implemented as scheduled as country-wide insurrections broke out soon after the announcement of the Plan.

Even if it had been it is hard to see how the ambitious targets of the Plan in the agricultural and forestry sectors could have been achieved. Without very active Government support, no detailed planning of which was evident in the Plan, the private farming sector would have found it difficult to restore pre-war level of production within three or four years.

4. In spite of these shortcomings, the Two-Year Plan for Development of Burma remains a remarkable document. Its general principles, strongly socialistic, were in keeping with the spirit of the times. It was a remarkably faithful embodiment of the economic beliefs and aspirations of the leaders dating back to the days of the nationalist movement. It is therefore not surprising that most of the policy measures contemplated by the Plan were implemented by the AFPFL Governments sooner or later in the course of their ten-year rule. It is no coincidence that 11 out of 12 industrial projects, the Plan recommended for immediate implementation, materialized in the course of time. Although the AFPFL Governments announced later the Eight-Year and Four-Year Plans, the Two-Year Plan of Economic Development of Burma in conjunction with the later " Our Goal and Our Interim Programme " policy statement of 1953 remained their Economic Testament.

Eight-Year Plan

5. Government's pre-occupation with the problems of law and order prevented it from further economic planning and development effort until 1951 when a group of American engineers and economists was engaged with ECA aid for the formulation of an Economic and Engineering Survey of Burma. Their Preliminary Report was submitted in January 1952 and the Comprehensive Report in August 1953. The Plan, known by the various names of KTA Plan, the Pyidawtha Plan and the Eight-Year Plan adopted a national income target roughly doubling the Gross Domestic Product in real terms between 1950-51 and 1959-60. This meant a 31 per cent increase over pre-war GDP but only a 4 per cent increase in *per capita* production on account of the population growth. Thanks, however, to a smaller outflow of income abroad *per capita* consumption in the target year represented a 8·7 per cent increase over the pre-war level. Essentially therefore, the goal of the Eight-Year Plan was merely a restoration of the pre-war level of living. While not a very high ambition compared to certain other countries, for a country like Burma whose productive capital equipment was almost halved as a result of the war damage, to achieve even this modest goal was no mean a task.

6. The Eight-Year Plan estimated that total net development expenditures required to carry the economic system forward from its position at the beginning of 1952 to an output of K 7,000 million by 1959-60 would be K 7,500 million. Since the latter amount of investment expenditures would be incurred between January 1952 and September 1960, the change in GDP for purposes of calculating the capital-output ratio might be taken as between 1950-51 and 1959-60. Calculated this way, the capital-output ratio assumed by the Plan worked out at less than 2·5 : 1. Investment expenditures were divided roughly equally between rehabilitation expenditures expected to yield a capital-output ratio of 2 : 1 and development expenditures estimated to yield a higher capital-output ratio of 3 : 1. Investment activities began in early 1952 and when the Plan was finalized towards the end of fiscal year 1952-53, a total of K 900 million was estimated to have been spent between January 1952 and September 1953. Therefore only K 6,600 million remained

to be spent between 1953-54 and 1959-60, and that remaining portion was programmed as in the table below:—

TABLE 1.—*Time phasing of Development Expenditures*

Year.	*Expenditure.* (K million)
January—September 1952	415
1952-53 (estimate)	485
Programmed 1953-54	655
1954-55	830
1955-56	950
1956-57	1,015
1957-58	1,030
1958-59	1,050
1959-60	1,070
Total, 1952 to 1959-60	7,500
Total, 1953-54 to 1959-60	6,600

7. Out of the total amount of K 7,500 million the public sector was estimated to account for K 4,020 million and the private sector for approximately K 3,470 million. The Plan envisaged an average overall gross capital formation rate of 20·2 per cent of Gross Domestic Product. Net capital formation was however only 14·2 per cent of GDP, owing to a high depreciation rate in private sector housing, thus crediting the private sector with a net capital formation of 6·5 per cent of GDP only, while the remaining 7·7 per cent was on account of the public sector. A shift in emphasis from public to private sector in the later years was also expected by the planners.

8. In the tables below a statistical assessment of the fulfilment of the Eight-Year Plan is made. For the programmed period 1953-54 to 1958-59, actual gross capital formation in the public sector fell short of the target by 26 per cent. A 23 per cent shortfall was registered in the private sector during the same period. Net total capital formation for the economy fell short of the target by as much as 27 per cent. These measures of shortfall, however, did not make any allowance for the increase in price level between 1950-51 and the programmed years of goods and services which went into capital formation. Steel prices had risen considerably during this period—by no less than one-third. Wholesale prices of building materials in UK and Japan, from which Burma imported a considerable proportion of her import needs, went up by 13 per cent and 26 per cent respectively between 1952 and 1958. It is clear that the current prices of capital formation figures would have to be deflated quite significantly to bear comparison with targeted figures in 1950-51 constant prices. Domestic wages for unskilled labour however rose by only about 10 per cent during this period.

9. In Table 3 actual capital formation, net and gross, as a percentage of GDP is compared with the planned rates. The average rate of gross capital formation achieved as a percentage of GDP for the years 1953-54 to 1958-59 was 18·9 compared to the planned rate of 21·2. Similarly, the average rate of net fixed capital formation achieved as a percentage of GDP for the same period was 13·1 compared to the planned rate of 15·1. It is interesting to know that although the absolute magnitudes of capital formation were lower than planned, due to the lower level of GDP being realized than expected, the relative development effort made

came quite close to the planned level. However it must be pointed out here that in order to sustain this relatively high level of developmental effort, resort was had to a new source of capital resources, namely, foreign loans and aid, the use of which the Plan had not contemplated.

TABLE 2.—*Capital Formation, Planned and Actual*

(K million)

Year (1)	Gross Govt. Capital Formation		Gross Private Capital Formation		Gross Total Capital Formation		Net Total Capital Formation	
	Plan (2)	Actual (3)	Plan (4)	Actual (5)	Plan (6)	Actual (7)	Plan (8)	Actual (9)
1953-54	565	435	470	398	1,035	833	655	564
1954-55	695	562	495	344	1,190	906	830	626
1955-56	745	519	570	433	1,315	952	950	662
1956-57	740	509	645	509	1,385	1,018	1,015	716
1957-58	670	533	735	602	1,405	1,135	1,030	817
1958-59	615	420	815	583	1,430	1,003	1,050	671
1959-60	590	472	865	526	1,455	998	1,070	657

TABLE 3.—*Capital Formation as per cent of GDP*

Year (1)	Gross		Net	
	Plan * (2)	Actual † (3)	Plan * (4)	Actual † (5)
1953-54	19·9	18·2	12·6	12·3
1954-55	21·4	18·8	14·9	13·0
1955-56	22·1	18·4	16·0	12·8
1956-57	21·9	18·7	16·1	13·1
1957-58	21·3	21·1	15·6	15·2
1958-59	21·1	18·0	15·4	12·0
1959-60	20·8	16·8	15·3	11·0

* In terms of 1950-51 prices.
† In terms of current prices.

10. On account of the shortfall in the level of capital formation as well as an increase in the capital-output ratio, the GDP in real terms in 1959-60 barely surpassed the pre-war level and fell short of the target of the Plan by 16 per cent as shown in Table 4. Similarly, the *per capita* output in 1959-60 fell short of the target by 17 per cent and was, on account of the increase in population, still 13 per cent below that of pre-war. *Per capita* consumption likewise fell short of the target by 18 per cent but was, on account of the smaller outflow of income abroad, only 13 per cent below that of pre-war.

TABLE 4.—*National Income Targets and Fulfilment*

Year (1)	GDP (in K million) 8-Year Plan (2)	Actual* (3)	*Per Capita* Production		*Per Capita* Consumption	
			8-Year Plan (4)	Actual (5)	8-Year Plan (6)	Actual (7)
			K		K	
1938-39	...	5,317	...	323	...	211
1950-51	3,690	3,690	199	199	144	144
1951-52	3,911	3,911	209	208	143	143
1952-53	4,244	4,192	223	219	150	152
1953-54	...	4,351	...	225	...	152
1954-55	...	4,620	...	235	...	153
1955-56	...	4,793	...	242	...	153
1956-57	...	5,306	...	264	...	183
1957-58	...	5,129	...	251	...	169
1958-59	...	5,491	...	265	...	174
1959-60	7,000	5,878	340	281	224	183

* Adjusted to conform to the base figure used in Eight-Year Plan calculations of GDP which have since been revised.

Capital-Output Ratio

11. It was mentioned earlier that the marginal capital-output ratio assumed by the Plan was less than 2·5 : 1. In practice, however, the ratio turned out to be higher, *i.e.*, 2·6 : 1. The ratio is worked out in the following table for the investment period of 1952-53 to 1958-59 allowing for a relatively short gestation period of one year. It must however be admitted that year to year changes in GDP in an export economy like Burma are not very meaningful from the point of view of calculating capital-output ratios on account of the dominant influence of exogenous factors such as climate and external markets for staple export. Another point to note in the following table is that since the GDP figures are in 1950-51 constant prices and capital formation figures in current prices, the ratio might be slightly distorted by any change between 1950-51 and the years after in the price level of goods and services which went into capital formation.

TABLE 5.—*Capital-Output Ratios*

(K million)

— (1)	1952-53 (2)	1953-54 (3)	1954-55 (4)	1955-56 (5)	1956-57 (6)	1957-58 (7)	1958-59 (8)	1959-60 (9)
Net fixed capital formation ...	397	564	626	662	716	817	671	657
GDP in 1950-51 constant prices	4,192	4,351	4,620	4,793	5,306	5,129	5,491	5,878
Increase in GDP ...	...	159	269	173	513	− 177	362	387
Total net fixed capital formation, 1952-53 to 1958-59.	...	...	...	...	...	...	4,453	...
Total increase in GDP, 1952-53 to 1959-60.	...	...	...	...	...	...	1,686	...
Marginal capital-output ratio	...	...	...	...	...	...	2·6 : 1	...

Allocation of Investment

12. The allocation of investment between different sectors of the economy intended or desired by the Eight-Year Plan is not very clear since the Plan did not give a breakdown by field of activity of the expected investment in the unplanned (mostly private) sector. In the planned (mostly public) sector, however, the allocation of investment appeared to be as follows:—

TABLE 6.—*Allocation of Investment by field of Activity*

(K million)

	Total Planned Sector. *	*of which Government.* †	*of which Implemented* 1953-54 *to* 1959-60. ‡
Irrigation ...	451	370	...
Mineral Industry ...	115	115	24
Manufacturing ...	230	230	371
Power ...	963	780	504
Ports and Waterways	568	500	706
Railways ...	273	870	
Highways ...	820		
Airways ...	85	85	
Telecommunications	30	30	41
Total ...	3,535	2,980 or 3,000 rounded.	

---

* Comprehensive Report, August, 1953.
† The New Burma, September, 1954.
‡ Budgeted.

13. Table 7 shows the distribution of capital expenditures made during the 8 years ending 1959-60. "Primary productive capital" (1 + 2 + 3 + 4) will take up only 20·7 per cent while "secondary productive capital" (5 + 6 + 7) will take up 35·9 per cent and "social and administrative capital" (8 + 9 + 10 + 11) as much as 43·4 per cent. This distribution held in spite of the efforts under the Four-Year Plan during the second half to shift the emphasis to direct productive capital away from indirect productive capital.

TABLE 7.—*Allocation of Capital Expenditures Spent*

(K million)

Sector (1)	1952-53 (2)	1953-54 (3)	1954-55 (4)	1955-56 (5)	1956-57 (6)	1957-58 (7)	1958-59 (8)	1959-60 (R.E.) (9)	1952-53 to 1959-60 (10)
1. Agriculture and Irrigation	4·6 (1·4%)	107·6 (16·9%)	6·5 (1·2%)	35·9 (7·1%)	43·8 (9·4%)	60·7 (12·1%)	40·8 (9·4%)	66·5 (12·3%)	366·4 (9·2%)
2. Forest ...	12·2 (3·7%)	11·8 (1·8%)	2·8 (0·5%)	3·8 (0·8%)	7·1 (1·5%)	5·3 (1·1%)	5·8 (1·3%)	6·5 (1·2%)	55·3 (1·4%)
3. Mining ...	0·3 (0·1%)	2·9 (0·5%)	8·5 (1·6%)	4·0 (0·8%)	4·9 (1·1%)	3·3 (0·7%)	0·1 ...	0·3 (0·1%)	24·3 (0·6%)
4. Industry ...	4·0 (1·2%)	47·5 (7·4%)	71·4 (13·3%)	63·7 (12·5%)	54·5 (11·7%)	34·6 (6·9%)	13·4 (3·1%)	85·4 (15·9%)	374·5 (9·4%)
5. Power ...	2·0 (0·6%)	69·4 (10·9%)	52·5 (9·8%)	78·7 (15·5%)	75·9 (16·4%)	112·4 (22·5%)	60·0 (13·7%)	54·8 (10·2%)	505·7 (12·8%)
6. Transportation ...	63·7 (19·5%)	125·1 (19·6%)	104·0 (19·3%)	78·6 (15·4%)	65·1 (14·0%)	89·8 (18·0%)	116·2 (26·6%)	127·6 (23·7%)	770·1 (19·5%)
7. Communication ...	5·0 (1·5%)	8·0 (1·3%)	16·0 (3·0%)	14·4 (2·7%)	18·6 (4·0%)	24·7 (4·9%)	25·1 (5·3%)	29·4 (5·5%)	141·2 (3·6%)
8. Construction ...	35·2 (10·8%)	67·9 (10·6%)	129·6 (24·1%)	83·7 (16·4%)	38·7 (8·3%)	17·7 (3·5%)	13·9 (3·2%)	27·2 (5·0%)	413·9 (10·5%)
9. Social Services ...	28·9 (8·8%)	32·0 (5·0%)	41·8 (7·7%)	19·8 (3·9%)	16·3 (3·5%)	18·0 (3·6%)	28·3 (6·5%)	35·5 (6·6%)	220·6 (5·6%)
10. Miscellaneous ...	106·3 (32·5%)	50·8 (8·0%)	15·4 (2·8%)	26·7 (5·3%)	32·9 (7·1%)	34·8 (7·0%)	36·4 (8·3%)	18·5 (3·4%)	321·8 (8·1%)
11. Law and Order ...	65·2 (19·9%)	115·0 (18·0%)	90·2 (16·7%)	99.7 (19·6%)	106·0 (23·0%)	98·3 (19·7%)	96·3 (22·1%)	87·0 (16·1%)	757·7 (19·2%)
Total ...	327·4 (100·0%)	638·0 (100·0%)	538·7 (100·0%)	509·0 (100·0%)	463·8 (100·0%)	499·6 (100·0%)	436·3 (100·0%)	538·7 (100·0%)	3,951·5 (100·0%)

TABLE 8.—*Financial Projections Implicit in the Eight-Year Plan*

(K million)

Year (1)	Change in Foreign Reserves (2)	Excess of Private Foreign Payments Over Receipts (3)	Foreign Exchange Surplus accruing to Government (4)	Budget Surplus for Capital Expenditures in Burma (5)	Net Non-Budget Receipts (6)	Total Government Surplus for Capital Expenditure in Burma (7)	Government Capital Expenditure in Burma (8)	Excess of Government Disbursements over Receipts in Burma (9)	Comprehensive Government Budget (4)—(9) (10)
1952-53 ...	+429	−110	+319	−15*	100	85	205†	120	+199
1953-54 ...	+440	+9	+449	−10	105	95	262	167	+282
1954-55 ...	+260	+42	+302	−5	110	105	339	234	+68
1955-56 ...	+260	+86	+346	50	115	165	385	220	+126
1956-57 ...	+307	+75	+382	95	120	215	388	173	+209
1957-58 ...	+358	+78	+436	135	125	260	358	98	+338
1958-59 ...	+445	+72	+517	165	130	295	348	53	+464
1959-60 ...	+470	+31	+501	190	140	330	331	1	+500

(1) From Comprehensive Report on Economic and Engineering Survey of Burma, Table III—6.
(2) Do. Table III—12.
(4) Do. Table III—9.
(5) Do. Table III—10.
(7) Do. Table III—8.
(8) Do. Table III—11.

* Because current expenditures were expected to fall short by K 40 million from budgeted level.

† Because capital expenditures were expected to fall short by K 20 million from budgeted level.

Pattern of Financing

14. Capital expenditures of the Government were to be financed from huge current account surpluses expected from State Agricultural Marketing Board profits. As shown in Table 8, there were sizable kyat deficits in the early years but they were more than offset by foreign exchange surpluses to yield substantial comprehensive government budget surpluses. In the meantime, as can be seen in Table 9 the inflationary impact of government kyat deficits was absorbed by "anti-inflationary private imports," aided in earlier years by rapid gains in production made possible by elimination of underemployment.

TABLE 9.—*Trend in the Money Supply in the Hands of the Public*

(K million)

Year	Change due to Government Domestic Transactions	Change due to F.E. Transactions	Total Change during the year
1952-53	+120	+110	+200*
1953-54	+167	−9	+158
1954-55	+234	−42	+192
1955-56	+220	−86	+134
1956-57	+173	−75	+98
1957-58	+98	−78	+20
1958-59	+53	−72	−19
1959-60	+1	−31	−30

* Net decrease in commercial bank credit of K 30 million is reflected in the figure.

15. In practice however, the Comprehensive Government Budget in most years registered a deficit instead of the planned surplus as shown in Table 10. Furthermore, the anticipated huge foreign exchange surplus turned into deficits or much smaller surpluses for most of the Plan years as pointed out in Table 11.

TABLE 10.—*Comprehensive Government Budget Surplus, Planned and Actual*

(K million)

Year.	*Plan.*	*Actual.*
1952-53	+199	−24
1953-54	+282	−522
1954-55	+68	−489
1955-56	+126	−113
1956-57	+209	−7
1957-58	+338	−54
1958-59	+464	−206
1959-60	+500	−130

TABLE 11—*Foreign Exchange Earnings and Expenditures*

(K million)

Year	Receipts						Payments net of non-trade receipts		Excess of receipts	
	Rice Exports		Other Exports		Total receipts from exports					
(1)	Plan (2)	Actuals (3)	Plan (4)	Actuals (5)	Plan (6)	Actuals (7)	Plan (8)	Actuals (9)	Plan (10)	Actuals (11)
1938-39 ...	...	218	...	267	...	485	...	328	...	157
1950-51 ...	...	756	...	235	...	991	...	824	...	167
1951-52 ...	...	748	...	277	...	1,025	...	866	...	159
1952-53 ...	1,134	993	260	274	1,394	1,267	965	1,019	429	248
1953-54 ...	1,428	754	300	245	1,782	999	1,342	1,435	440	-436
1954-55 ...	1,445	660	320	253	1,765	913	1,505	1,153	260	-240
1955-56 ...	1,544	889	340	292	1,884	1,181	1,624	941	260	240
1956-57 ...	1,634	839	370	313	2,004	1,152	1,697	1,478	307	-326
1957-58 ...	1,705	713	400	305	2,105	1,018	1,747	986	358	32
1958-59 ...	1,772	680	435	300	2,207	980	1,762	925	445	55
1959-60 ...	1,835	801	470	...	2,305	...	1,835	...	470	...

16. The main reason for the above-mentioned chain of shortfalls in the Eight-Year Plan lay in the over-optimistic forecast of the production and export proceeds of rice, the staple crop of the economy. A comparison in Table 12 of the "intermediate" estimates of the Plan for rice output, exports and proceeds, let alone the "high" estimates, with actuals will illustrate how the Plan was put out of gear by errors made in a single major assumption. The serious shortfall in rice acreage was probably due to prolonged insecurity or lack of incentive or both. Under-estimation of domestic consumption might have also contributed partly to an over-estimate of the exportable surplus in the Plan. Poor quality of milling, inefficient marketing and unrealistic pricing might also be responsible for failure to push the sale of available rice in certain years. But the most important factor in these miscalculations was the over-estimation of the export price. The average price of rice per ton was almost halved between 1952-53 and 1958-59 while the Plan had assumed a very gradual decline by less than 14 per cent. As a result the actual proceeds from rice exports in the years after the downturn in 1952-53 were on the average only half of the Plan estimates.

The End of Eight-Year Plan

17. The downturn in the world price of rice occurred as the implementation of the development programme was gaining momentum. As both continued, a severe and rapid drain on the foreign exchange reserves of the country resulted, accentuated somewhat by

the liberalized import system kept on from the days of the rice boom, and helped in no way by the somewhat unrealistic pricing policy for rice. Foreign exchange reserves fell continuously from K 1,269 million in end June 1953 to K 628 million in end February 1955.

18. In the following month, March 1955, the Government took drastic measures to arrest the drain on foreign reserves. The value of all import licences issued but not yet utilized was reduced by half and the Open General Licences were temporarily suspended. Exchange controls both for the public and private sectors were tightened. Cuts were made in the budget allotments for both current and capital expenditures for the remaining half of the fiscal year. In general only those projects on which work had started or commitments made were allowed to be continued. The remaining projects were suspended until further notice. Some orders for equipment were cancelled while some others were deferred or staggered.

TABLE 12.—*Rice, Output, Exports and Proceeds* (*Intermediate Estimates and Actuals*)

Period	Sown Acreage 1,000 Acres		Paddy Output in Terms of Rice 1,000 Ton		Exportable Surplus of Rice 1,000 Ton		Export of Rice 1,000 Ton		Price per Ton in Kyat		Value of Exports in Kyat Million	
	Plan	Actual *	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1950-51	9,467	9,444	3,684	4,053	1,142	1,398	1,320	1,367	564	554	745	758
1951-52	9,698	9,752	3,885	4,197	1,299	1,559	1,110	1,151	709	703	787	809
1952-53	10,331	10,331	4,278	4,374	1,602	1,994	1,350	1,216	840	837	1,134	1,019
1953-54	10,781	10,398	4,403	4,182	1,714	1,594	1,886	1,268	786	662	1,482	840
1954-55	11,198	10,161	4,573	4,234	1,837	1,391	1,806	1,631	800	518	1,445	845
1955-56	11,615	10,263	4,788	4,279	2,004	1,569	1,962	1,931	787	454	1,544	877
1956-57	11,979	10,386	4,980	4,708	2,150	1,759	2,114	2,005	773	446	1,634	895
1957-58	12,292	10,160	5,150	4,063	2,274	1,463	2,243	1,463	760	453	1,705	663
1958-59	12,604	10,402	5,328	4,800	2,405	1,840†	2,372	1,615	747	443	1,772	716
1959-60	12,917	10,667	5,506	5,118	2,537	...	2,504	2,103†	733	407†	1,835	856†

* CSLR figures.

† Provisional.

First Four-Year Plan

19. The Eight-Year Plan was modified for 1956-57 to 1959-60, by a more modest Four-Year Plan covering only the public sector. It was formulated in 1956. In view of the vulnerability to instability of the Burmese economy, (1) the lessening of instability and (2) the strengthening of the base of the economy were made the objectives of the Four-Year Plan. The room for play of investment criteria under the Four-Year Plan was limited to the extent it would inherit projects already commenced or committed in other ways under the Eight-Year Plan. In the choice of new projects which were not concomitant to the projects in progress, however the criteria (1) of balance of payments effect, (2) of low capital-output ratio and (3) of the creation of external economies, were given priority, in that order. Application of the criterion of balance of payments effect led to the choice of projects which would earn or save foreign exchange. Efforts at export promotion were confined to agriculture whereas those at import substitution covered both agriculture and light consumer industries.

Resources and Expenditures

20. Since the Four-Year Plan was to be a government investment programme, financial resources available to the Government for capital expenditures for the Plan years were first calculated. Mutual adjustment was then made between the resources and projected capital expenditures.

TABLE 13.—*Four-Year Plan Resources and Expenditures, Planned and Actual*

(K million)

—	1956-57	1957-58	1958-59	1959-60
a. Four-Year Plan estimate	526	303	343	384
b. Resources realized	517	348	222	327(R.E.)
c. Additional foreign receipts	100	93	231	183(R.E.)
d. Actual resources available (*b*+*c*)	617	441	453	510(R.E.)
e. Capital expenditures made	520	500	436	538(R.E.)
f. Capital expenditures budgeted	591	567	558	542
g. Capital expenditures planned *	586	517	476	452
h. Capital expenditures planned †	580	600	640	691

* As prepared jointly by Economic Consultants and Burmese Economists as of 17th July 1956.

† As revised later by Economic Consultants.

21. It can be seen from the above table that the financial resources realized again fell short of the Plan estimates in the last two years. Recourse was made to an increased dependence on foreign loans, aid and receipts. Consequently, actual resources available, K 2,021 million came quite close to the level of capital expenditures made, *i.e.*, K 2,077. Also noteworthy is the fact that for the first three years of the Plan, the level of capital expenditures planned were usually exceeded by budgets but the actual expenditures made come closer to expenditures planned than to expenditures budgeted.

22. Thus capital expenditures in the public sector under the Four-Year Plan did not fall short of the planned level, as was the case in the Eight-Year Plan. This was partly due to a more realistic assessment of the Government's ability to implement development projects which itself had improved with experience. Another point to note is that while the Government capital expenditures under the Four-Year Plan fell short of the Eight-Year Plan targets for the corresponding years by about 30 per cent, they nevertheless were

equal in magnitude to the actual expenditures during the first half of the Eight-Year Plan. Therefore, although it is correct to say that the Four-Year Plan is a cut back from the Eight-Year Plan targets, it is not correct to say that the Four-Year Plan is a cut back from the performance of the public sector in the first half of the Eight-Year Plan.

Targets and Performance

23. A comparison of some selected goals of the Four-Year Plan with the actual achievement in the four years of the Plan is made in Table 14.

TABLE 14.—*Some Selected Goals of the Four-Year Plan*

— (1)	1955-56 Actuals (2)	1956-57 Actuals (3)	1957-58 Actuals (4)	1958-59 Actuals (5)	1959-60 Target (6)	1959-60 Actuals (7)
AGRICULTURE						
Sown Acreage (000 acres)—						
Paddy	...	10,386	10,160	10,402	12,000	10,667
Groundnut	...	855	880	1,004	1,200	1,086
Cotton (M5)	...	108	95	114	400	110
Jute	...	8	21	32	150	21
Virginia Tobacco	...	5	11	9	6	8
Production (000 tons)—						
Paddy	...	6,362	5,490	6,486	7,200	6,916
Groundnut	...	195	231	284	300	275
Cotton (M 5)	...	2·4	2·1	2·5	20	2·4
Jute	...	0·8	2·8	2·7	50	2·6
Virginia Tobacco	...	1·0	2·7	1·7	1	1·3
FORESTRY—Production						
Teak (in cubic tons of round logs)	...	178,077	187,077	237,188	324,000	250,474
Non-teak (in cubic tons of round logs)	...	704,904	689,683	597,711	560,000	660,843
MINERALS—Production						
Tin ores and concentrates (tons)	700	1,000	1,800	1,018	2,100	1,091
Tungsten	600	1,400	700	416	600	371
Mixed tin and tungsten	2,100	300	800	1,482	600	1,068
Lead ores and concentrates	30,000	27,000	33,600	36,045	33,600	31,943
Zinc ores and concentrates	13,000	15,700	17,900	20,757	22,000	18,428
Coal	1,000	...	...	...	10,800	...
Others	4,000	6,000	5,700	6,497	6,000	17,160
Building and road materials †	474,000	208,000	359,000	615,550	521,000	521,000
INDUSTRIAL PRODUCTION						
Cotton yarn (000 lbs.)	3,074	3,658	4,780	6,839	6,335	8,591
Cotton cloth (000 yds.)	401	1,073	2,336	3,373	3,792	3,106
Sugar (000 tons)	16	27	40	39	57	38
Cement (000 tons)	49	35	30	36	55	44
Tea (000 lbs.)	1,373	980	1,352	380*	1,550	...
Brick (000 Nos.)	...	2,813	6,172	10,830	4,000	11,662
Tile (000 Nos.)	...	...	1,301	654	5,700	821
Steel Rolling Mill (ton)	...	...	3,500	6,033	...	8,049
Jute (000 No. of bags)	...	2,552	11,344	14,391	24,000	13,498
Cigarette (000 Nos.)	264,223	745,964	941,886	1,226,152	800,000	1,359,650

* Up to January 1959.

† Estimates.

It appears that the targeted agricultural acreage and output were not fulfilled except in the case of Virginia tobacco. Hardwood production had long since surpassed the target while only a few mineral targets, set low on account of the low prices prevailing then, was reached or surpassed in 1959-60. With regard to foreign exchange, the main target of the Plan, the increase of reserves at the end of 1959-60 was K 21 million compared to the targeted replenishment in the Plan period by K 172 million.

Allocation of Investment

24. Attempts were made in the formulation of investment pattern under the Four-Year Plan to reverse the overemphasis on indirect production and underemphasis on direct production in the Eight-Year Plan. Agriculture and irrigation received a greater emphasis—its share in total investment being doubled from the preceding four years actual expenditure. Allocations for forestry and mining were also stepped up, although their share of total investment was still low because of lack of readiness of projects. Industry and power retained their share of total investment, being largely a continuation of committed projects. Attempts to scale down expenditures on transport and communications were not altogether successful on account of heavy commitments and the necessity to rehabilitate transportation facilities in the face of insurgent destructive activities. Construction and miscellaneous expenditures were considerably scaled down. Social service expenditures, though much desirable, were kept within modest limits in order to free more resources for investment in economic production. Expenditures on law and order were kept up by the need for rapid and complete restoration of law and order.

25. When it came to budgeting and implementation, however, certain sectors registered a shortfall while others showed an increase. Thus agriculture and irrigation could not use all the outlays while those on forestry were limited by the non-capital-intensive nature of the industry. In the mining sector, the continued depression of world mineral prices and the suspension of Kalewa coal project reduced the outlays to a negligible proportion. Work on Baluchaung hydro-electric project was expedited and this was accordingly reflected in the stepping up of expenditures. The Plan's allocation of outlay for transportation was exceeded on account of the ease with which projects in this sector could be implemented and of the need for expanding transportation facilities to cope with pent up demand for travel and freight with the improvement in security conditions towards the end of the Plan period. On account of financial stringency, social services expenditures were somewhat curtailed. The increase in miscellaneous expenditures was mainly due to the contribution to the sector for capital expenditure.

TABLE 15.—*Allocation of Investment Planned and Implemented under Four-Year Plan*

(K million)

—	1952-53 to 1955-56	1956-57		1957-58		1958-59		1959-60		1956-57 to 1959-60	
(1)	(2)	Plan (3)	Actuals (4)	Plan (5)	Actuals (6)	Plan (7)	Actuals (8)	Plan (9)	R.E. (10)	Plan (11)	Implementation (12)
Agriculture and Irrigation ...	154·6 (7·7%)	71·4	43·8	86·2	60·7	86·1	40·8	89·7	66·5	333·4 (16·4%)	211·8 (10·9%)
Forest	30·6 (1·5%)	13·9	7·1	11·7	5·3	16·3	5·8	17·4	6·5	59·3 (2·9%)	24·7 (1·3%)
Mining	15·7 (0·8%)	19·6	4·9	40·5	3·3	30·2	0·1	30·8	0·3	121·1 (6·0%)	8·6 (0·4%)
Industry	186·6 (9·3%)	48·3	54·5	41·6	34·6	36·6	13·4	37·1	85·4	163·6 (8·1%)	187·9 (9·7%)
Power	202·6 (10·1%)	85·0	75·9	71·3	112·4	51·3	60·0	31·5	54·8	239·1 (11·8%)	303·1 (15·6%)
Transportation ...	371·4 (18·4%)	136·6	65·1	72·9	89·8	60·9	116·2	62·4	127·6	332·8 (16·4%)	398·7 (20·6%)
Communications ...	43·4 (2·2%)	17·2	18·6	17·1	24·7	18·1	25·1	17·0	29·4	69·4 (3·4%)	97·8 (5·1%)
Construction	316·4 (15·7%)	30·6	38·7	26·9	17·7	27·1	13·9	32·4	27·2	117·0 (5·8%)	97·5 (5·0%)
Social Services ...	122·5 (6·1%)	33·9	16·3	39·0	18·0	39·4	28·3	45·8	35·5	158·1 (7·7%)	98·1 (5·1%)
Miscellaneous	199·2 (9·9%)	10·1	32·9	9·6	34·8	8·7	36·4	7·7	18·5	36·1 (1·8%)	122·6 (6·3%)
Law and Order ...	370·1 (18·3%)	120·0	106·0	100·0	98·3	100·0	96·3	80·0	87·0	400·0 (19·7%)	387·6 (20·0%)
Total ...	2,013·1	586·6	463·8	516·8	499·6	474·7	436·3	451·8	538·7	2,029·9	1,938·4

NOTE.—Expenditures for 1959-60 were not budgeted within the framework of the Four-Year Plan.

Present Position of Burmese Economy

26. Where the economy of Burma stands to-day, 15 years after the War and at the end of 13 years of Independence and 2 economic plans, is roughly indicated by a few selected figures on production, export and public utilities in Table 16. It will be seen from the table that the paddy lands abandoned during the War have not been fully rehabilitated although sown acreage under other crops has somewhat increased. Thanks, however, to improved yield as a result of use of fertilizers, improved seeds, etc., paddy production does not lag behind pre-war levels as much as sown acreage. On the other hand, on account of the increase in domestic consumption by a larger population, rice exports in 1959-60 were only two-thirds of the pre-war level. Production of groundnut, pulses, sesamum and sugarcane is well above the pre-war level whilst that of cotton is considerably lagging behind. Both teak production and export are below pre-war but the relative greater lag in export is due partly to the policy of rebuilding stocks, partly to increased consumption at home and consumer resistance abroad. The discrepancy between production and export is even larger in the case of hardwoods the output of which increased over 30 per cent while its export fell by as much as 75 per cent. Increased domestic consumption as well as its uncompetitive export price are responsible for this.

TABLE 16.—*Some Economic Indicators Pre-War and To-day*

—	Pre-war	1959-60 Actuals	1959-60 as a % of Pre-war
1. Paddy sown acreage (thousand acres)	12,832	10,667	83
2. Paddy production (thousand tons)	7,426	6,916	93
3. Rice export (thousand tons)	3,303	2,080	64
4. Total agricultural sown acreage (thousand acres)	19,166	17,720	91
5. Index of agricultural production	100	102	102
6. Agricultural exports other than rice (thousand tons)	249	311	125
7. Teak production (cubic tons of round logs)	453,481	250,474	55
8. Teak export (cubic tons of round logs)	215,000	90,591	42
9. Non-teak production (cubic tons of round logs)	501,866	660,843	132
10. Non-teak export (cubic tons of round logs)	40,600	10,070	25
11. Petroleum production (thousand gallons)	275,673	143,342	52
12. Mineral production (tons)*	188,992	70,061	37
13. Mineral exports (tons) †	139,402	44,457	32
14. Electric power-installed capacity (kW)	33,800	190,668	564
15. Electric power-installed capacity units generated (mil.kWh)	48	246	513
16. Railways passenger traffic (passenger-miles in million)	433	950	219
17. Railways freight traffic (ton-miles in million)	3·1	2·6	84
18. IWTB passenger traffic (passenger in million)	8·0	5·0	62
19. UBA passenger traffic (passenger-miles in million)	...	20·2	...

* Tin ores and concentrates, tungsten ores and concentrates, mixed tin and tungsten, lead ores and concentrates, zinc concentrates, iron, manganese, copper and nickel.

† Tin, tungsten, mixed tin and tungsten, lead and lead unwrought, zinc, manganese, nickel, copper and other base metals.

Pre-war period for which data available.—1-1936-37 to 1940-41 average, 2-ditto, 3-1938-39, 4-1936-37 to 1940-41 average, 5-ditto, 6-1938-39, 7-1936-37 to 1940-41 average, 8-1938-39, 9-1936-37 to 1940-41 average, 10-1938-39, 11-1939, 12 and 13-1939, 14 and 15-1938-39, 16-1939-40, 17-1937-38 to 1940-41 average, 18-1937-38 to 1940-41 average.

27. Petroleum production is half of pre-war while the output and export of other mineral products is only about a third. On the other hand, installed capacity of electric power has increased five-and-a-half times, due to the installation of Baluchaung hydro-electric power plant. Pending the fuller utilization of the Baluchaung plant, units of power

generated have increased by five times only. In the field of transport, passenger traffic on railways has doubled while freight traffic is still 16 per cent below the pre-war level. Inland Water Transport Board on the other hand has suffered a drastic decline in passenger traffic and presumably also in freight traffic primarily at the hands of private water crafts.

28. Overall trends as well as structural changes, if any, in the economy can be better observed from national income estimates shown in Table 18. It will be seen that the GDP finally regained the pre-war level in 1956-57 and stood 11 per cent above it in 1959-60. Among the components, General Government sector shows the fastest growth as a result of expansion of the governmental machinery in keeping with its increased responsibilities. " Other Public Utilities " also shows a marked increase on account of expanded electricity power capacity and generation. " Other industries and Services " sector increase primarily reflects the post-war growth in manufacturing and service industries. The slight increase in forestry sector is due to a substantial increase in hardwoods and minor forest produce which more than offset the decline in teak production. Most other sectors such as Agriculture and Fisheries, Mining and Quarrying, Rice Processing and State Transport show a decline. Although the pre-war level of GDP has been surpassed in 1959-60, *per capita* gross output is still only 87 per cent of pre-war on account of the growth in population. Consumption *per capita* is also still 13 per cent below the pre-war level.

29. In the pre-war structure of the Burmese economy, agriculture and its allied sectors such as rice processing and marketing contributed as much as 59 per cent to the total GDP. To-day, the ratio is 47 per cent. If forestry and mining are added, dependency on primary extractive industries would amount to 68 per cent pre-war and 56 per cent to-day. However, taking foreign trade by itself, one can notice an increased dependence on a single crop, *i.e.*, rice, to-day (70 per cent of total value of exports as compared with 47 per cent pre-war) on account of the cessation of petroleum export and a drastic decline in export of other mineral products and timber. It cannot therefore be said that there has been a structural improvement in the Burmese economy since the War. This is confirmed by a comparison (only approximate because of changes in classification) of occupational distribution of the working populations pre-war (1931 Census) and post-war (1953-54 Census) as shown in Table 17. But it can be claimed, however, that the pattern of ownership of means of production has changed significantly.

30. In pre-war Burma, half the land in Lower Burma was in the hands of non-agriculturists, prominent among whom were the Chettiar money-lenders who owned 20 per cent of the best land. In rice-milling industry, Steel Brothers and some other European firms owned the larger mills while the Indian and Chinese owned a number of medium-sized mills. External marketing was done by European, Chinese and Indian firms who grouped themselves into a Rice Merchants' Association. While the reserved forests of Burma were exploited by the Government Forest Department most of the large private lessees or contractors were foreign firms such as the B.B.T.C.L., Steel Brothers, Foucar and Finlay. External marketing of timber was also done by the leading European firms. In the mining field, there were the Burmah Oil Company and others in the production and refining of petroleum, the Burma Corporation for mining silver and lead and the Mawchi Mines for tin and tungsten. Banking, insurance, shipping and foreign trade were almost entirely in the hands of the foreigners. Among public utilities an inland water fleet (Irrawaddy Flotilla Co., Ltd.) and electricity for the capital (Rangoon Electricity and Tramways Co., Ltd.) were run by private concerns.

31. To-day, land has been nationalized, Burmese participation in rice milling has increased and external marketing is a government monopoly yielding substantial amounts of revenue to the Government. Milling and marketing of teak are now done by the State Timber Board while the extraction continues to be done by the Forest Department. The Government is now an equal, if not a major, shareholder in all the large mining ventures. In addition to a fullfledged Central Bank, the State now has its own Commercial Bank which does nearly half of the total commercial bank lending and an Agricultural Bank through which an increasing amount of vital agricultural credit is channelled to millions of cultivators. The Government has also taken over from the Chinese the management of pawnshops which are the most important source of short-term credit for the urban general populace. A number of Burmese banks are now in existence. The State also owns an almost complete set of public utilities—railways, inland as well as external waterway fleets, airways, electricity supply, telecommunications, etc. The Union Insurance Board now does an expanding insurance business on behalf of the Government. In the field of trade, about 25 per cent of consumer imports are a monopoly of the Civil Supplies Management Board which also does the distribution of these essential commodities while another 15 per cent are imported by the Joint Venture Trading Corporations in which the Government has a controlling share. In general Burmese participation in the commercial and industrial life of the country, either through the Government, co-operative or private forms of organizations has markedly increased. Apart from all this, redistribution of income and property has been attempted wherever possible, as evidenced by a fairly steep progressive taxation, both direct and indirect, and levelling down of higher salaries and upgrading of lower salaries in the Government services.

TABLE 17.—*Occupational Distribution of Working Populations Pre-war and Post-war*

	1931	1953-54
Agriculture	69·6%	62·9%
Industry	10·7%	9·3%
Trade	9·0%	10·6%
Services	5·1%	4·4%
Transport	3·6%	2·4%
Mining	0·6%	0·7%
Miscellaneous	1·4%	9·7%

TABLE 18.—*Gross Domestic Product*, Per Capita *Gross Output and Consumption in* 1947-48 *Prices*

(K million

Industry (1)	1938-39 (2)	1947-48 (3)	1953-54 (4)	1954-55 (5)	1955-56 (6)	1956-57 (7)	1957-58 (8)	1958-59 (9)	Revised 1959-60 (10)
1. Agriculture and Fisheries ...	1,907	1,451	1,521	1,577	1,617	1,753	1,620	1,797	1,878
2. Forestry	360	273	289	303	314	344	347	347	362
3. Mining and Quarrying	273	29	49	60	66	84	102	117	116
4. Rice Processing	182	125	125	129	131	144	124	147	156
5. State Marketing	633	286	278	371	460	493	434	452	572
6. State Transport	117	63	68	79	78	76	74	82	88
7. State Banking	...	1	2	2	9	12	14	13	18
8. Other Public Utilities	31	14	22	26	28	31	37	29	50
9. General Government	153	229	412	435	461	487	535	570	595
10. Rental Value of Housing ...	165	151	177	185	194	203	210	215	220
11. Other Industries and Services ...	1,124	935	1,103	1,127	1,098	1,307	1,273	1,337	1,411
12. Gross Domestic Product—									
a. Million Kyat	4,945	3,557	4,046	4,294	4,456	4,934	4,770	5,106	5,466
b. Index (1938-39 = 100) ...	100	72	82	87	90	100	95	103	111
13. Gross Output *per capita*—									
a. Kyat	302	200	210	220	226	247	235	248	263
b. Index (1938-39 = 100) ...	100	66	70	73	75	82	78	82	87
14. Consumption *per capita*—									
a. Kyat	195	163	140	141	141	169	156	161	169
b. Index (1938-39 = 100) ...	100	84	72	72	72	87	80	83	87

CHAPTER II

PLANNING OBJECTIVES AND TARGETS

Long-term Objectives

1. A review of the progress of the economy of the Union under the former plans and an assessment of its present position, made in the previous chapter, has led to two broad conclusions, namely:—

(1) that the pattern of ownership of means of production and instruments of economic activity has considerably changed in the direction of socialization, accompanied by efforts, not too successful, to transfer foreign owned enterprises into the hands of nationals, and

(2) that the pre-war structure of the Union's economy as a primary producing, almost monoculture, economy has not changed at all.

2. From the first conclusion it would naturally follow that since the slicing of the cake has been made as equitable as possible so far, it remains now to enlarge the size of the cake in order, for each, to get a larger share. It was noted in the previous chapter that it took the Union nearly 15 years after the war to regain the pre-war level of national income. On account of the growth of population, *per capita* income in the Union today is still 13 per cent below the pre-war level. As a result the Union today has one of the lowest levels of *per capita* incomes in the world, even allowing for the underestimation of official national income estimates due to the use of the relatively low internal price of rice in their computation.

3. *Increased standard of living* for the people of the Union should therefore be a primary planning objective. In fact a *doubling of the present* per capita *real income* may be aimed at for the end of a sixteen-year period during which there can be a series of 4 Four-Year Plans. Since during this period the population of the Union is expected to increase by more than 50 per cent the national income will have to be trebled from a level of K 6,284 million in 1960-61 to K 19,780 million in 1977 in terms of 1960 prices. In order to achieve this the annual rate of growth will have to increase progressively from a little short of 6 per cent in the first Plan period to about 7·6 per cent in the second Plan period, to about 9 per cent in the third Plan period, and then fall to 7·25 per cent in the fourth Plan period. At these rates of growth the national income of Burma is expected to double in the first ten years (the same target as in the Japanese Plan for the sixties) to be redoubled after a further period of another 10 years. Even when these ambitious rates of growth are achieved during the long-term planning period beginning 1961 and ending 1977, the level of living achieved after these Four-Year Plans is expected to be only 74 per cent higher than the pre-war level of living.

4. The second conclusion about the persistence in the Union's economic structure of excessive dependence on primary production would naturally point to the need for diversification of the economy. *A modernized diversified economy based on efficient agriculture and expanded industry capable of self-sustained growth* should therefore be another long-term objective of planning in the Union. It is expected that at the end of this long-term Plan period, the Union economy will have, so to speak, "taken off" on to a process of self-sustained growth. In order to do this, the economy must be sufficiently diversified in order to be free from vulnerability to external fluctuations. In other words, the continued persistence in the Union economic structure of excessive dependence on primary production (50 per cent of national output on agriculture and two-thirds of foreign exchange earnings on rice alone) must be eliminated. There must therefore be diversification within agriculture as well as diversification away from agriculture towards industry. In order to diversify agriculture

and moreover to generate an increasing surplus from agriculture with which to invest in industrial facilities it is necessary to modernize agriculture itself. This would then be followed by an expanded industry beginning with light consumer industries and gradually broadening its base towards heavy industry.

5. Spontaneous economic development has a tendency to be centred around the capital city or even around some other sizable towns on account of the factors of security, accessibility and availability of other external economies. Apart from giving rise to problems of excessive urbanization, the uneven pace of development leads to the emergence of depressed areas in the country. In order to prevent these tendencies from asserting themselves and furthermore to redress the lag in development of certain areas in the country, particularly those in the State areas, it is important to give increased attention to this problem of balanced regional development. *A regionally balanced economy* should therefore be another long-term objective of planning. Besides being desired as a purely economic goal in itself, balanced regional development is vitally essential to the political stability of the Union.

6. For a country of sizable geographical area and variety of natural resources hedged in between two large countries with populations of over 400 and 600 million respectively, a little over 20 million may not be an optimum population. While the present rate of fertility is about 45 per thousand (the biological maximum), the death rate of about 30 is also one of the highest in the world. It is expected as a result of public health measures taken that the death rate will rapidly decline leading to *increased rate of growth of population*, perhaps an approximate doubling of the present population within two decades.

Second Four-Year Plan Objectives

7. Short-term objectives and targets for the Second Four-Year Plan period (1961-62—1964-65) will no doubt be derived from the long-term objectives. For example in order to achieve the long-term target of doubling the national income in the first ten years, the *rate of growth* in the Second Four-Year Plan period will have to be stepped up to about 6 per cent from a level of 5 per cent projected in the Draft Plan. Assuming the rate of growth of population of about 2·3 per cent the rate of increase of *per capita* output or income under the Second Four-Year Plan is now estimated at 3·6 per cent.

8. Similarly, with a view to the achievement of a regionally balanced economy at the end of the long-term planning period, the rate of growth in the relatively more backward areas in the Union, particularly those in the State areas, will have to be accelerated even faster than in the more developed areas. *Accelerated rate of growth of relatively more under-developed areas* will therefore be another Second Four-Year Plan objective.

9. Likewise, the long-term objective of establishing a diversified economy based on efficient agriculture will require a rapid diversification within agriculture during the Second Four-Year Plan period. As a step towards this aim, efforts will be made during this period to achieve *self-sufficiency in selected agricultural products* such as oil-seeds, sugarcane, cotton and wheat and at the same time *increased export of such agricultural products* as rice, beans and pulses and virginia tobacco. These will no doubt contribute to saving of imports and earning of additional foreign exchange.

10. As a measure of diversification towards industry, the Second Four-Year Plan aims at production of selected industrial products to substitute current imports. Achievement of *self-sufficiency in these selected industrial products* will not however mean a reduction in the level of foreign trade as the foreign exchange saved will be diverted towards the purchase of other foreign goods, particularly capital goods.

11. Independent Union of Burma started out on a socialistic tendency in economic affairs. A great deal of socialization of means of production and economic activities accompanied by redistribution of income and property has been accomplished. Public sector has expanded considerably not only in the field of public utilities but also in the fields of industry, mining and trade. In its fiscal policy the Government has not only pre-empted all the non-inflationary means of financing such as borrowings from the public and from abroad but has also resorted to a substantial amount of deficit financing thereby diverting resources from the private to the public sector. Partly due to the discouragement of these policies and some stringent controls and regulations and partly due to the lack of capital, foresight and skills, private sector has not achieved the possible rate of investment in the past years. In order therefore to make full utilization of private initiative and energy in the development of the economy, particularly in the field of industry, it is necessary to take measures to strengthen the private sector of the economy. If a rate of growth of about 6 per cent is aimed at during the coming years, a much greater effort than hitherto will have to come out of the private sector. The *strengthening of the private sector* will therefore rank as one of the most important objectives of the Second Four-Year Plan.

12. *Reinforcing the infrastructure of the economy* will make more effective the investment by the private sector apart from creating external economies for the Government's own investment and conferring benefits to their direct recipients as in the case of health, education and other social services. The latter are expected to contribute to the increased rate of growth of population to achieve an optimum population in the long run. Development of transport and communications will contribute to the unity of the component parts of the Union politically, economically and culturally, apart from contributing directly to the maintenance of law and order in the country. On account of the benefits it can offer, the reinforcement of the infrastructure of the economy will remain, as in the previous plans, a major objective of the Second Four-Year Plan.

CHAPTER III

PRIORITIES AND CRITERIA

1. Once the objectives and targets of the Plan are established it is necessary to lay down programmes of action to achieve them. The programmes so laid down must be such that they would yield the desired result with a minimum expenditure of resources. This must be necessarily so since the resources available are not unlimited. In fact, it is the scarcity of resources which necessitates planning. Not only is it true that resources are scarce but some resources are more scarce than others. This limited availability and relative scarcity of resources give rise to problems of establishing priorities. It therefore becomes necessary to formulate a set of criteria as a guide to establishing priorities. However, once the overall objectives and targets of the Plan are defined, criteria for establishing priorities essentially follow from them. The following set of criteria will serve as a guide to establishing priorities. These criteria are—

(1) maximum contribution to national income,
(2) balance of payments effect,
(3) use of domestic raw materials,
(4) creation of additional employment,
(5) creation of external economies, and
(6) contribution to balanced regional development.

Maximum Contribution to National Income

2. One of the prime objectives of the Plan is to increase national income at a rapidly rising rate. Therefore projects that contribute maximum output in relation to resources input should be given top priority. Since some types of resources are more scarce than others it means that projects that use less of relatively scarce resource should get priority, for only such projects would yield maximum output in relation to cost of input. Generally speaking, capital is scarce—which means that it is an expensive item of cost. Therefore projects with the lowest capital-output ratio must be given top priority. In other words, projects which employ labour intensive methods shoud be preferred. However it would not be correct to assume that capital alone is scarce. Foreign exchange is scarce too. Perhaps certain types of skill are even more scarce than either capital or exchange. Generally, relative scarcity of resource is reflected in its price, particularly in the private sector. Then the criterion of maximum contribution to national output coincides with the maximum profit criterion which is the principle guiding the action of private businessmen. However, the price paid in the public sector often does not truly reflect the relative scarcity of the type of resources used. In such a case maximum output and maximum profit depart from each other. For this reason, maximum output rather than maximum profit should be taken as a criterion in assigning priorities to projects in the public sector.

Balance of Payments Effect

3. It was pointed out in the last paragraph that foreign exchange is a scarce factor. In fact, in the recent past, it was one of the factors which had limited the size of the development programme. In spelling out the criterion of maximum contribution to output it was pointed out that foreign exchange should be economised. But such an economy measure alone would not be sufficient. There must also be positive action to increase foreign exchange availability so that acceleration of rate of capital formation may not be impeded. Therefore projects that affect balance of payments favourably should be given priority.

4. A favourable balance of payments may be achieved either by cutting down payments abroad or by increasing receipts from abroad. Correspondingly there are two types of projects which affect the balance of payments favourably. One type of projects aims at increasing production of export commodities in the country while the other aims at increasing production of commodities which are substitutes of commodities at present being imported. The former may be called export—promoting projects while the latter may be called import—substituting projects. The rice expansion project is an example of the former type while groundnut expansion project is one of the latter type. Which of these two types should be preferred depends on prevailing circumstances.

Use of Domestic Raw Materials

5. This criterion is closely related to the preceding criterion of balance of payments effect as it also arises from the fact that foreign exchange is scarce. In the past four years raw material imports rose by 50 per cent which was more than proportionate to the actual expansion in industrial production. This more than proportionate expansion was in part due to a change in classification as some amount of raw materials in earlier years was brought in as ordinary imports. But a considerable proportion of this increase was no doubt caused by opportunists taking advantage of the relatively liberal import policy on raw materials under false pretences. Import of raw materials is justified in case where such raw materials cannot be produced in the country or in case when production of such materials is not yet economical because of the limited domestic market. There are no doubt several industries which use imported raw materials to the overall advantage of the economy. An example is plastic moulding industry which is not yet large enough to produce raw materials in Burma but has met local demand of a variety of products in small quantities which would have been much more costly to import. On the other hand, there are industries where processing involves no more than labelling of the imported materials. A case in point is the import of gourmet powder which is brought in bulk and packed by the distributors in small packages.

6. Use of domestic raw materials saves scarce foreign exchange. But this criterion is intended to help achieve the desired goals in another way. Use of imported materials generates income only in the industry which uses the imports whereas use of domestic raw materials generates income not only in that industry but also in the industry which produces the raw materials. In some cases generation of income might extend to several industries. Therefore projects which use domestic raw material should be given priority.

Creation of Additional Employment

7. Even though unemployment has never been acute in this country as in such neighbouring underdeveloped countries as India and Pakistan, the problem cannot however be glossed over lightly. Even now, partly as a result of liberalizing higher education, the problem of educated unemployment is looming large. With the increase in labour force, the problem of unemployment might become serious unless appropriate measures are taken immediately. In such a case, projects which create the greatest amount of employment per kyat output must be given priority. This is the same thing as saying that projects which employ labour intensive methods should be preferred.

8. To ascertain how serious the problem of employment might be in the near future, a set of calculations are made in the following sections of investment requirements to employ

the additions to the labour force in the Second Four-Year Plan period. However, a firm estimate of the population of Burma and its rate of increase is not possible pending the Census of 1963. A rate of increase rising from 1·8 per cent in 1959-60 to 3 per cent in 1965-66 and 1953-54 Census participation ratios are used for estimating the total population, economically active population and new entrants to the working population during the Plan period.

Increase in Workers

9. The 1953-54 Census contain data on working population. There are two concepts used in this Census with regard to the working population, " Labour Force " and " Census Year Workers". The " Labour Force " and " Census-Year " figures are close for the urban population but the two sets of data differ considerably for the rural population. This is because the Labour Force figures apply to all persons actually working at the time of the Census, all persons on leave and to all persons seeking work during the seven days before the day the Census was taken. As the Rural Census was taken between the 22nd and the 28th of February in 1954, just after the harvest, quite a good portion of the rural labour force, being seasonal labour were neither working, nor were they on leave or looking for work. The Census Year figures cover persons who worked one or more months during the calendar year prior to the period February 22nd and 28th of 1954. Hence the Labour Force figure was smaller than the Census Year Worker figure. The Census Year data will therefore be used as a benchmark in estimating the growth in the new working population to be employed during the Plan period. It has been estimated by Dr. R. M. Sundrum of Rangoon University that 36·6 per cent of the urban population, 41·7 per cent of the rural population and 40·9 per cent of the total population belonged to the working population during the 1953-54 Census.

10. To estimate the number of persons for whom work has to be provided during the Plan period we will assume that the proportion prevailing in 1953-54 holds throughout the Plan period. This means that there is no net shift in the working population from rural to urban and *vice versa* and the same rates of productivity as well as employment hold. On the basis of the sex and age estimates of the total population and of their different participation rates in 1953-54 Census the number of urban and rural workers needing employment are arrived at.

Employment for Urban Workers

11. Employment opportunities depend on capital. In a UN booklet, " Measures for the Economic Development of Underdeveloped Countries," $2,500 or K 11,875, was estimated to be required for each new employee to be absorbed in non-agricultural occupations. They include the cost of research and training. Ceylon's Six-Year Programme of Investment, 1954-55 to 1959-60, estimates that the cost of employing workers on " ministry projects " will be about K 11,500 per worker. In India's Second Five-Year Plan, total investment of both the private and public sectors is estimated as Rs. 62,000 million and the employment to be generated is for about 8 million persons. The proposed investment per additional worker therefore comes to Rs. 7,500. In the Conference Papers published by the Ministry of National Planning in 1951, Dr. K. Martin indicated K 7,500—8,000 as the need per additional worker outside agriculture. The ECAFE takes K 7,125 per worker as the cost per additional worker required for a more balanced development in Asian countries. In Burma there has as yet been no study as to the investment needed per worker. It will therefore be assumed here that investment per urban worker, *i.e.*, including cost of housing, public utilities and ancillary services will be in the region of K 10,000 per worker. The

following table shows how much it would cost to employ the new entrants into the working population in the Plan years:—

TABLE 19.—*Cost of Providing Work for New Urban Workers*

Year (1)		Urban Population (2)	Urban Working Population (3)	Increase in urban working population (4)	Total cost * (K million) (5)
1959-60	...	3,300,000	1,207,800	...	...
1960-61	...	3,359,400	1,229,540	21,740	217·40
1961-62	...	3,426,588	1,254,131	24,591	245·91
1962-63	...	3,501,973	1,281,722	27,591	275·91
1963-64	...	3,586,020	1,312,483	30,761	307·61
1964-65	...	3,679,257	1,346,608	34,125	341·25

* At K 10,000 per worker.

22,000
× 10,000
220 million

Rural Workers

12. Estimates of the size of the rural working population are given in Table 22. Some sources say that there is a shortage of labour in some paddy districts. But as of today no definite statement can be made as to the geographic distribution and magnitude of this shortage. On the other hand there could be districts where there is currently a surplus of labour. For the purpose of our projections, we will assume that the surpluses and deficits of labour in agriculture will so balance out that the new increases in the Plan period may be considered as net increases for whom work has to be found and capital provided.

13. On the basis of the 1953-54 Census, Dr. Sundrum has estimated that there were 1·823 million " Own Account Workers " in 1953-54. It is estimated that there were 16·386 million persons in the rural areas in that year. Own account workers are the equivalent of the cultivating owners or tenant cultivators of the 1931 Census. Thus other categories of the agricultural population such as agricultural labourers and unpaid workers are excluded in our estimates of capital requirements because the size of the working population who are cultivators that is, workers on own account, is a better indication of the number of basic working units and the capital needed. If the ratio of own account workers to total rural population prevailing in 1953-54 is projected into the four years of the Plan period we would have the following " own account " workers to provide land with.

TABLE 20.—*Total Cost of Land for Own Account Workers*

Year (1)			Total Rural Population (2)	Own Account Workers* (3)	Increase in own account workers (4)	Land required acres † (5)	Cost of Land‡ (6)
							K
1959-60	...	...	18,700,000	2,080,375	...	...	...
1960-61	...	...	19,036,600	2,117,822	37,447	374,470	29,957,600
1961-62	...	...	19,417,332	2,160,178	42,356	423,650	33,884,800
1962-63	...	...	19,844,513	2,207,702	47,524	475,240	38,019,200
1963-64	...	...	20,320,782	2,260,687	52,985	529,850	42,388,000
1964-65	...	...	20,849,122	2,319,465	58,778	587,780	47,022,400

* 11·125 per cent of total Rural Population.
† 10 acres per farm.
‡ Cost of bringing land into cultivation at K 80·00 per acre.

14. In addition to 10 acres of land per own account worker, it will be necessary to provide him with cattle, cart and other equipment such as a plough, hoe, etc. The cost of each set of equipment is estimated at K 1,350. The following table shows consolidated costs of these items and the land:

TABLE 21.—*Total Cost for Rural Agricultural Labour*

(K million)

Year (1)			Cost of Land (2)	Cost of equipment (3)	Total cost (4)
1960-61	...	...	29·958	50·553	80·511
1961-62	...	...	33·885	57·181	91·066
1962-63	...	...	38·019	64·157	102·176
1963-64	...	...	42·388	71·530	113·918
1964-65	...	...	47·022	79·350	126·372

15. Next comes the investment necessary to equip rural workers who are not in the agricultural, forestry, fishing and hunting industries. One way of looking at

the rural working population who are now said to be employed in mining and quarrying, manufacturing, construction, electricity, commerce, transport and services is to consider them as the spear-head of the urbanization movement. The table below provides an estimate of the cost of providing facilities for these workers at the minimum cost per head for urban workers. It adopts K 3,500 per head as the investment needed toprovide work for the rural non-agricultural working population.

TABLE 22.—*Total Cost for Rural Non-Agricultural Working Population*

Year (1)	Rural Population (2)	Total Rural Working Population (3)	Non-Agr. Rural Working Population * (4)	Increase in Non-Agr. Rural Working Population (5)	Total Cost † (6)
					K
1959-60	18,700,000	7,797,900	2,206,806	...	...
1960-61	19,036,600	7,938,262	2,246,528	39,722	139,027,000
1961-62	19,417,332	8,097,027	2,291,459	44,931	157,258,500
1962-63	19,844,513	8,275,162	2,341,871	50,412	176,442,000
1963-64	20,320,782	8,473,766	2,398,076	56,205	196,717,500
1964-65	20,849,122	8,694,084	2,460,426	62,350	218,225,000

* 28·3 per cent of column (3).
† K 3,500 per head.

Total Investment

16. Adding up the total cost of providing work for all categories of new workers, urban, rural agricultural and rural non-agricultural, during the Plan period, an amount of K 235·3 crores or an annual average of K 58·8 crores is arrived at as indicated by Table 23. These amounts of net investment required to provide work for new workers during the Plan period will however be considerably exceeded by the planned net investment of K 437 crores for four plan years or an average of K 109 crores per year. However, it must be remembered that these amounts of net investment do not include any provision for employment of the presently unemployed or the presently under-employed persons in the labour force of today. Neither do they contemplate any more modern and therefore more productive methods of production than existing at present. As the standard as well as the cost of living increases, a larger proportion of the workable (economically active) population will be compelled to seek work. If these factors and a net shift from rural agricultural to urban industrial (which after all must be the aim of any development plan) are taken into account, these amounts of net investment requirements will be significantly increased. Nevertheless, in view of the large margin between these figures and the planned investment targets of the Plan, it can be safely concluded that Burma need not fear additional unemployment on account of inadequacy of investment *vis-a-vis* the rate of increase of labour force. However, a considerable amount of internal structural adjustment would be required to adapt the educational system of the country to the employment needs of the economy. Moreover, measures to reduce existing

under-employment such as the encouragement of cottage industries and the timing of public works in agricultural off-season will have to be taken.

TABLE 23.—*Estimated Total Cost of Providing Work for New Workers*

(K million)

Year (1)	Cost for Urban Workers (2)	Cost for Rural Agriculture Workers (3)	Cost for Rural Non-Agriculture Workers (4)	Total Cost (5)
1960-61	217·40	80·51	139·03	436·94
1961-62	245·91	91·07	157·26	494·24
1962-63	275·91	102·18	176·44	554·53
1963-64	307·61	113·92	196·72	618·25
1964-65	341·25	126·37	218·23	685·85

External Economies

17. External economies may be defined as benefits accruing to one firm or industry as a result of investment by another firm or industry. For example when a mining concern builds a road to the mine a farmer living close by also benefits because he can now transport his products more conveniently. Building of the road by the mining concern has created an external economy to the farmer. This criterion directly follows from two of the planning objectives, namely, the strengthening of private sector and reinforcing the infrastructure of the economy. Indeed without this criterion, most of public investment would not be justified. Costs of such social overheads as bridges and dams, roads and canals can never be recovered by charging a reasonable price to the user. They must therefore be judged by how much they contribute to rising national output by creating economies to other industries. Again there are industries which could be self-financing but whose optimum size is so large that either the private sector would not undertake them or it would result in monopoly if left in their hands. Railways, waterways and power supply are of this nature. Such industries should not be judged by profit criterion alone because more of their contribution lies in creating external economies thereby indirectly contributing to achieve higher output.

Balanced Regional Development

18. Imbalanced regional growth leads to unequal distribution of income and wealth which in turn leads to disharmony between people living in different regions. Such a tendency is doubly undesirable in Burma which is a multiracial Union. While therefore in general the geographical location of development project should be decided purely on its economic merits, *i.e.*, proximity to source of raw materials, fuels, markets, etc., it is also a legitimate economic consideration to take into account the need to generate employment and income in an area which is economically depressed or relatively under-developed. With this in view, other things, being equal, preference should be given to State areas in location of development projects.

19. It has also been suggested that the Government should help develop related industries in each region or State, for example textile and related industries in the Dry Zone, dairy and related industries in the Shan State and sugar industries in Pyinmana region. In this way a pool of skilled labour and technicians who can be employed in any of the related industries would be gradually built up. Capital is also more mobile among related industries. As a result of geographical comparative advantage as well as that of specialization involved in the process of building up related industries such regionalization would contribute not only toward a balanced regional growth but also toward achieving greater social output.

CHAPTER IV

INVESTMENT TARGETS, PROGRAMMES AND ALLOCATION

Investment Requirements—National Income Approach

1. Average annual increase in the Gross Domestic Product of Burma in the eight-year period 1952—60 was in the order of 5 per cent, as shown in the following table on Gross Domestic Product movements in 1947-48 constant prices.

TABLE 24.—*Rates of increase of GDP*

— (1)	1952-53 (2)	1953-54 (3)	1954-55 (4)	1955-56 (5)	1956-57 (6)	1957-58 (7)	1958-59 (8)	1959-60 (9)	Average (10)
GDP in 1947-48 prices.	3,899	4,046	4,294	4,456	4,934	4,770	5,106	5,466	...
Increase in GDP ...	...	147	248	162	478	– 164	336	360	...
Per cent increase of GDP.	...	3·8	6·1	3·8	10·7	–3·3	7·0	7·1	5·0

2. It will be noticed from the above table that the year to year rate of growth of the Burmese economy in the past years has been somewhat uneven, unmistakably being an influence of the rice harvest. But for the set-back to the economy in 1957-58 as a result of the extremely rare bad weather and poor harvest, the average annual rate of increase in the Gross Domestic Product might have been higher than 5 per cent. Considered in this context, a little short of 6 per cent growth aimed at by the Second Four-Year Plan may not be unrealistic. On the other hand, as the size of the Gross Domestic Product grows, it is only to be expected that to achieve the planned rate of growth, a greater investment effort will have to be made.

3. The average annual rate of growth of 5·9 per cent planned for the Second Four-Year Plan period, is expected to rise to 7·6 per cent in the next Four-Year Plan period, further to 9 per cent in the next plan period, and then decline to 7·25 per cent in the last plan period. If these rates of growth are achieved, the Gross Domestic Product will be doubled in the first 10 years, and redoubled in another 10 years. Pending the Census of 1963, population projections are made at rising rates of increase of 1·8 per cent from 1959-60 to 3 per cent from 1965-66 onwards. At these rates of growth of income and population, *per capita* income at constant prices of 1959-60 is expected to double in 1977 at the end of a sixteen-year period.

4. In Chapter I it was mentioned that the marginal capital output ratio assumed by the Eight-Year Plan was less than 2·5 : 1, although in practice it turned out to be higher, *i.e.*, 2·6 : 1. Even this ratio of 2·6 : 1 is probably overstated, since the GDP figures are in 1950-51 constant prices and capital formation figures in current prices, the ratio being inflated to the extent the price level of goods and services which went into capital formation rose, as it certainly must have done, since 1950-51. Another explanation for the higher capital output ratio in the past is that the implementation of development projects did not go very well. Most industrial investments in the public sector and some agricultural projects fell considerably short of expected results, both in the gestation period and in the operational efficiency. Having learned these mistakes, it may not be unreasonable to expect an improvement in the capital output ratio for the Second Four-Year Plan in spite of the fact that the

element of rehabilitation will gradually decrease while the element of development increases. The increase in investment outlays on direct production relative to infrastructure investments and the relatively larger role of the private sector (1 : 1 instead of 1 : 2) *vis-a-vis* the public sector under the new Plan should also improve the capital output ratio. It is therefore proposed to assume the same marginal capital output ratio of 2·5 : 1 as assumed in the Eight-Year Plan for the Second Four-Year Plan. Amounts of net investments required during the Second Four Year-Plan period to increase the Gross Domestic Product at the planned rates are accordingly calculated in the following table :—

TABLE 25.—*GDP and Net Investment*

(K million)

Year	GDP at 1959-60 prices	△GDP	Net Investment
1960-61	6,284	...	...
1961-62	6,598	314	1,005
1962-63	7,000	402	1,085
1963-64	7,434	434	1,170
1964-65	7,902	468	1,265
1965-66	8,408	506	...

Investment Requirements—Sectoral Approach

5. Investment requirements can also be worked out through a sectoral approach, in other words, by adding up the costs of programmes and projects required to produce the targeted results. In this connection it should be remembered that increased productivity is the key to the success of the development plan. Certainly, to a large extent, increase in output as well as the rise in the rate of increase in output must come from employment of the growing labour force of the growing population as well as by reduction of underemployment. This should occur both in the rural and the urban sectors. In the rural sector double or triple cropping and diversification of crops would give increased employment and income. In the urban sector industrialization would absorb new entrants to the labour force as well as a large number of underemployed workers. This increase in output as a result of increase in employment is both necessary and desirable and in itself constitutes development. However, the point is that if the rate of growth envisaged in the plan is to be fully achieved, there definitely must also be an increase in productivity, *i.e.*, increase in output per worker per hour. In a sense, transforming the underemployed to the fully employed may be said to yield increased productivity since the output of the latter would be greater than the output of the former. But the objective to be achieved is not just that but is to increase the output per hour of the fully employed worker. In technical terms it means not expanding the scale of production but raising the production function itself. This can be done by the use of more skill, better organization, efficient tools and advanced techniques. All this in turn calls forth vast investment, both economic and social.

6. In *agriculture*, the long-term objective will be the establishment of modern technology in agriculture with a pattern of production closely related to the internal needs of the country with regard to essential food-stuff and industrial raw materials as well as the export requirements. In order to achieve this long-term objective, eight basic measures namely—(1) extension service, (2) mechanization, (3) fertilizers, (4) agricultural credit, (5) irrigation,

(6) land conservation, (7) agricultural re-organization and (8) the system of incentives will have to be taken. (1) The long-term programme in *extension service* is to expand it from the present level of one worker for 20,000 to 30,000 acres to the ultimate level of one worker for every 5,000 acres. This will be accompanied by stationing of subject-matter specialists in each strategic zone in relation to particular crops. (2) While the long-range economic goal will involve a diversion of labour from agricultural to the industrial field, labour and cattle shortages are reported in many parts of the country even at the present, particularly in second cropping of the large area under rice. It is therefore necessary to make provision for extensive use of mechanized farming in order to overcome labour and cattle shortage as well as to increase productivity. As a step towards *mechanization* of agriculture, it is proposed in the Second Four-Year Plan to acquire 2,390 tractors.

7. (3) The present low level of agricultural yields can be raised by systematic applications of suitable *fertilizers* to the soil. This will involve (i) intensive research into the use of fertilizers for different crops on different types of soil, (ii) procurement of fertilizers either from abroad or from local production and (iii) distribution by the Government of fertilizers either at cost or on subsidy. The Second Four-Year Plan proposes to increase the use of fertilizers from the present level of about 14,000 to 16,000 tons to about 180,000 tons in the end year of the Plan period. (4) It has been estimated that the needs of *agricultural credit* are approximately K 30 crores as of now which may be stepped up in the near future in view of expected increases of output. At present only about K 9 crores are provided by the State. The Second Four-Year Plan proposes to increase agricultural credit outlay to a level of about K 17 crores in the end year of the Plan period.

8. Out of the 18 million acres now cultivated, 1·8 million or about one-tenth of the total area is now under *irrigation*. It is proposed to extend the irrigated area by 1·7 million acres by 1977. As a step towards this long-term objective the Second Four-Year Plan proposes to bring a total of 2·9 lakh acres under irrigation (2·5 lakh acres under irrigation proper and 39,000 acres under flood protection). In addition to this, the ARDC proposes to acquire 11,000 pumps over the Second Four-Year Plan period for irrigation purposes, some for sale and some others for hire to the cultivators.

9. In *forestry*, the long-term objective is the development of an integrated forest industry, proper conservation of forest resources, reafforestation of bare lands and improvement of forest research. The short-term objective under the Second Four-Year Plan is to raise teak production from the present level of 250,000 tons to the pre-war level of 500,000 tons, and to increase the present level of export of 91,000 tons to about 189,000 tons by the end year of the Plan. In order to achieve these production and export goals, it will be necessary to acquire more extractive power, both mechanical and animal, as well as more milling capacity.

10. The objective of *industrial* policy is the production of as many necessities of life at home as possible as well as the production at home of strategic industrial commodities likely to exert external economies on other industries. In pursuance of the Second Four-Year Plan objective of achieving self-sufficiency in selected industrial products, it is proposed to expand spinning and weaving capacity, sugar extraction capacity and cement production capacity. In addition, paper and fertilizer plants will be set up to satisfy the growing demand for these commodities. An iron smelter plant will also be considered in the event of successful exploration of iron ores in this country. While some of these large-scale industrial establishments will be undertaken by the public sector and some others by the private sector, or on a joint basis, there is also a considerable number of medium scale industries which are intended for the private sector.

11. Long-term objective in the *mining* field being full exploitation of mineral resources of the Union, the Second Four-Year Plan proposes to undertake an intensive survey and exploration by all scientific up-to-date methods. At the same time, the Plan will undertake maximum exploitation of known resources in the country, including Maputeh iron ore and Monywa copper.

12. While efforts in the Second Four-Year Plan period will be directed towards the full utilization of the *electric supply* of the first stage of the Baluchaung hydro-electric project through more and better distribution facilities both in Rangoon and outside, steps will be taken to begin the second phase of the project including the construction of a reservoir dam at Mobye which will help regulate the flow of water for the existing plant.

13. Long-term objective in the field of *transport and communications* is the establishment of an efficient network in the Union which will meet the requirements of (1) defence and administration, (2) production and trade and (3) social unity. In addition to sizable programmes of rehabilitation and expansion in railways, inland waterways and civil aviation, most of which expenditures are already committed under foreign aid arrangements, a considerable stepping up of developmental work is planned for highways, outports and river training.

14. In the field of *education*, while the long-term objective is to achieve free and adequate secondary education by 1977, it is proposed to complete the programme for compulsory primary education by 1969. An intensive teachers training scheme as well as a school construction programme will be required under the Second Four-Year Plan as a step towards the 1969 target. These will be accompanied by schemes to adapt the present academic biased secondary and higher education to needs of a modern economy with a large emphasis on vocational and scientific education.

15. Long-term objective in the field of health is to have one rural health centre for every 10,000 population. In the Second Four-Year Plan period, an intensive training of health-personnel will be made, accompanied by the establishment of 300 rural health centres, 20 twenty-five-bedded hospitals in the districts and one 200-bedded hospital and one children's hospital in Rangoon.

Allocation of Investment between Public and Private Sectors

16. Out of these and numerous other programmes and projects under the Second Four-Year Plan, the public sector plans to undertake half the amount of net investment. The other half will therefore have to be expected from the private sector. As shown in the following table, out of a total net investment of K 436·9 crores for the Plan (or an annual K 109·2 crores) the public sector will contribute K 220·9 crores *in toto* (or an annual K 55·2 crores), in other words, approximately half of the total. Since the public sector investment is depreciated uniformly at the historical rate of 16 per cent, projected average annual gross investment of the public sector of K 65·7 crores will be about 32 per cent higher than the historical level of K 50 crores.

17. Whereas public sector investment is uniformly depreciated, private sector investment needs to be broken down into two parts for purposes of depreciation. It should be pointed out that of the average annual private gross capital formation in the past eight years of K 45 crores, a large portion, in fact over K 19 crores, consisted of hutment dwellings in the countryside which need a renewal every three or four years. Non-hutment private capital formation therefore average only K 26 crores (gross) or K 23 crores (net). Assuming a 10 per cent depreciation for the non-hutment private capital, an average annual net investment in the private sector of K 54 crores under the Second Four-Year Plan means a gross non-hutment

investment of K 60 crores and a total gross investment of K 80 crores. Since the historical level of non-hutment private capital formation was K 23 crores (net) and K 25·6 crores (gross), the Plan's requirement of an average K 54 crores (net) and K 60 crores (gross) will represent a more than doubling effort :—

TABLE 26.—*Allocation of Investment*

(K million)

—	Total		Public		Private		
						Non-hutment	
	Gross	Net	Gross	Net	Total Gross	Gross	Net
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1961-62 ...	1,371	1,025	661	555	710	522	470
1962-63 ...	1,469	1,108	712	598	757	567	510
1963-64 ...	1,488	1,129	676	569	812	622	560
1964-65 ...	1,459	1,107	580	487	879	689	620
Average Annual ...	1,447	1,092	657	552	790	600	540

18. A reconciliation of net investment requirements calculated through national income and sectoral approaches in Table 27 indicates slight excesses of planned expenditures over requirements in the first two years but larger shortfalls in the latter two years of the plan period. Net shortfall for the entire Plan period is however only 3·6 per cent. The decline in the level of investment in the last year of the Plan, which is somewhat unusual for a growing economy, is due to isolated planning for a single plan period and will be remedied when the remaining years of the longer term plan are filled up.

TABLE 27.—*Net Investment Requirements through different Approaches*

(K million)

—	(1) National Income	(2) Sectoral	Excess (+) or Shortfall (−) of (2) over (1)
1961-62	1,005	1,025	+20
1962-63	1,085	1,108	+23
1963-64	1,170	1,129	−41
1964-65	1,265	1,107	−1,58
Total ...	4,525	4,369	−1,56
Average Annual ...	1,131	1,092	−39

Sectoral Allocation of Investment—Public Sector

19. Allocation of the Government's capital programme under the Second Four-Year Plan is shown in Table 28. Total level of capital programme being higher by over one-third than under the First Four-Year Plan, investment levels for all sectors under the Second Four-Year Plan are larger absolutely except for sectors of power and law and order. Changes in relative shares among sectors are explained in the following paragraphs.

TABLE 28.—*Allocation of Investment in the Public Sector*

(K million)

——	8-Year Plan 1952-53 to 1955-56	1st 4-Year Plan 1956-57 to 1959-60	2nd 4-Year Plan 1961-62 to 1964-65
Agriculture and Irrigation ...	154·6 (7·7%)	211·8 (10·9%)	316·7 (12·0%)
Forestry	30·6 (1·5%)	24·7 (1·3%)	67·8 (2·6%)
Mining	15·7 (0·8%)	8·6 (0·4%)	38·7 (1·5%)
Industry	186·6 (9·3%)	187·9 (9·7%)	279·8 (10·6%)
Power	202·6 (10·1%)	303·1 (15·6%)	203·8 (7·8%)
Transport and Communication	414·8 (20·6%)	496·5 (25·7%)	772·4 (29·4%)
Social Services (including construction).	438·9 (21·8%)	195·6 (10·1%)	497·2 (18·9%)
Law and Order	370·1 (18·3%)	387·5 (20·0%)	303·0 (11·5%)
Others	199·2 (9·9%)	122·6 (6·3%)	149·6 (5·7%)
Total ...	2013·1 (100%)	1938·3 (100%)	2628·9 (100%)

20. *Agriculture and Irrigation.*—It will be noticed that agriculture and irrigation receives an increasingly larger share of public outlay under each successive plan both in absolute amount and relative share. This is a result of the recognition of the relative neglect of this field in the earlier years as well as of the continued ability of the agricultural sector to generate a surplus for investment in other fields in the immediate future.

21. *Forestry.*—With the improvement in security conditions, an increasing reliance is being placed on forestry as a foreign exchange earner next to agriculture. This is however not fully reflected in investment figures on account of the relatively capital light nature of the industry. Provision of larger current expenditures for increased operations has however been made.

22. *Mining.*—As in the case of forestry, public outlays on mining will be stepped up although their magnitude is somewhat modest compared to other fields.

23. *Industry.*—Public investment in industry will be increased in order to pursue the Plan's objective towards self-sufficiency in strategic industrial products.

24. *Power.*—The decline in capital outlays for electric power under the Second Four-Year Plan is due to the completion of the first phase of the Baluchaung hydro-electric system. The Second Plan however includes provision for the commencement of the second phase of the Baluchaung project including the construction of Mobye dam.

25. *Transport and Communications.*—Public investment in transport and communications will range between 20 per cent and 30 per cent of total governmental outlay under successive plans. Further increases under the Second Four-Year Plan are due to projected investments in highways and modernization of railways and inland water fleet.

26. *Social Services.*—Expenditures on social services including construction will be stepped up again to almost the level under the Eight-Year Plan after a drastic curtailment under the First Four-Year Plan.

27. *Law and Order.*—Although the absolute level of capital expenditures on Law and Order is only slightly lower than in the previous periods, its relative share registers a significant decline on account of the larger base.

28. *Others.*—This sector under the Second Four-Year Plan includes the contribution to State Government's capital outlay, amounting to about half, and therefore is not strictly comparable to the previous periods.

Private Sector

29. A sectoral breakdown of private net fixed capital formation in the last few years as well as the average projected composition of likely investment under the Second Four-Year Plan is attempted in the table below:—

TABLE 29.—*Private Net Fixed Capital Formation by Sector*

(K million)

——	1957-58	1958-59	1959-60	1961-62 to 1964-65 Average
Housing (non-hut)	40	43	46	50
Agriculture	28	30	30	50
Industry, Tpt. and others.	304	277	213	440
Total ...	372	350	289	540

30. In projecting the sectoral composition of future private investment, past data which mostly relate to industry and date back to 1958 had to be used.

31. The growth in the industrial activity in Burma is surmised from information obtained by the Census of Industries conducted in 1953-54, the three subsequent Surveys of Manufacture, and the Sample Census of 1957. In the period from 1953-54 to 1957-58 there was a significant industrial advance. The value of product and receipts from services of industrial establishments and cottage industry increased by over 150 per cent. The number of persons engaged in industrial activities increased by over 40 per cent ; and the number of individual industry and cottage industry establishments increased by about 50 per cent.

32. The total value of industrial production in the year 1957-58 is estimated at about K 177·2 crores. Value added by manufacturing amounted to approximately K 66·8 crores representing 12·5 per cent of the estimated GDP nearly twice the contribution that industry made to national income in 1953-54. Of this the private sector accounted for 91 per cent of total output, and 92 per cent of all industrial production other than that of railroad shops, shipyards and saw mills.

33. Although much of the growth in industrial production had been through the formation of new establishments, there has been a significant increase in the value of

production of established plants from 1953-54 to 1957-58, the value of products and receipts of establishments that existed in both periods increased about 35 per cent. In 1957 about 40 per cent of all existing large establishments were in the food and beverages groups ; 13 per cent produced textiles ; 11 per cent footwear and apparels; 10 per cent tobacco products; 8 per cent wood, bamboo and cane ; and 5 per cent in oils, chemicals and soap.

34. In 1957-58, cottage industry contributed about 47 per cent of the total value of industrial production of the country and employed almost 60 per cent of all industrial workers. Cottage industry accounted for over 70 per cent of the value of textile products ; 64 per cent of the value of all footwear and apparel manufactures. The total value of cottage industry production more than quadrupled in the five years from 1953 to 1958. The greatest increase took place in textile weaving which expanded more than five times its earlier size and accounted for the spectacular increase in textile production of the total industrial structure. Production of food products, and footwear and apparel increased by 100 per cent and 200 per cent respectively during this period.

35. The number of persons engaged in cottage industry activities, including unpaid family workers, increased about 50 per cent between 1953-54 and 1957-58. Compared with the 300 per cent increase in the value of product, this suggests a tremendous increase in the productivity of this sector of the economy even considering a possible substantial rise in the unit value of product. With the improvement in the climate of opinion with regard to private investment we may expect further gains to be made.

Production Targets

36. The following table indicates what the output in some seventeen major industrial groups would be in 1965-66, *i.e.*, a year after the completion of the Plan. These targets will be reached if private net investment reaches the levels shown in Table 28. Industrial production is expected to increase significantly by the end of the Plan period. Major increases will take place in the following sectors, *viz.*, textiles, rubber products, chemicals, metals and transport equipment. Most of the industries listed are consumer industries. The few basic industries such as basic chemicals, basic metals and dockyards are expected to show large increases. The most important industries in terms of the gross value of output are the food and textile industries. In the latter group, cotton textiles is the most important.

TABLE 30.—*Production Targets*

(K Lakhs)

	Industry	1965-66
I	Food	5,809
II	Tobacco	1,315
III	Textiles	7,023
IV	Footwear and Wearing Apparel	1,009
V	Manufacture of Wood and Bamboo	600
VI	Furniture and Fixtures	64
VII	Paper and Paper Products	19
VIII	Printing and Allied Industry	230
IX	Leather Products	102
X	Rubber Footwear and other products	243
XI	Chemicals	3,830
XII	Petroleum	1,590
XIII	Manufacture of Non-metals	185
XIV	Basic metals	13
XV	Manufacture of metals	1,119
XVI	Transport equipment	134
XVII	Miscellaneous manufacturing	555
	Total	23,840

CHAPTER V

FINANCIAL RESOURCES FOR THE PLAN

1. RESOURCES ESTIMATES

A. Major Assumptions Behind Resources Estimates for Public Sector

1. From the financial point of view, the magnitude of the Government's capital development programme depends on available resources which can be considered in two parts, *i.e.*, revenue from domestic sources and from external sources. Available domestic resources are (1) current surplus arising from the difference between receipts and expenditure of Ministries and Departments, (2) current surplus of Boards and Corporations, (3) capital receipts of Boards and Corporations and (4) other receipts such as dividends on investment. External resources as distinct from foreign exchange earnings are foreign loans such as from the World Bank and other countries. Another source of foreign receipts for the Plan period is Japanese Reparations.

2. On the basis of data at present available, Government's financial resources for capital formation under the Second Four-Year Plan period (1961-62 to 1964-65) are estimated as follows :—

TABLE 31.—*Available Financial Resources for Public Sector Capital Formation*

(K million)

— (1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)	Total (6)
1. Current Surplus of Ministries and Departments.	+51	+13	−25	−44	−5
2. Current Surplus of Boards and Corporations.	+172	+173	+175	+178	+698
3. Capital Receipts of Boards and Corporations.	10	10	10	10	40
4. Other Receipts	82	82	82	82	328
5. Foreign Loans and other Receipts—					
China	35	38	57	46	176
ICA	24	59	56	48	187
IBRD	33	33	...	...	66
Reparations	95	95	95	95	380
6. Foreign Debt Servicing ...	−6	−6	−6	−6	−24
Total ...	496	497	444	409	1,846

3. According to the foregoing calculations, the minimum level of permissible Government capital expenditure is K 1,846 million for the four years or an average annual expenditure of about K 462 million only. This figure is lower than the average level of K 470 million in the First Four-Year Plan period.

4. The decline in Government financial resources is due mainly to two factors : (1) diminishing SAMB surplus and (2) the increase in Government expenditures. SAMB surplus is expected to decline due primarily to the depletion of old rice stocks purchased in previous years and available for export in the current years. On the other hand, current expenditures of the Ministries and Departments are expected to increase from an average level of K 930 million in the First Four-Year Plan period to an average level of K 1,145 million in the Second Plan period.

B. Domestic Financial Resources for the Public Sector

5. Domestic financial resources for the public sector arise from the current surplus of Ministries and Departments, current surplus of Boards and Corporations, capital receipts of Boards and Corporations and other receipts.

Current Surplus of Ministries and Departments

6. This arises from the difference between current expenditure and current receipts of the Ministries and Departments of the Union Government.

(*a*) Current expenditure of Ministries and Departments in the Revised Budget Estimate for 1960-61 is K 1,063 million. If there is no expansion of personnel, the normal increase arising from annual increments is assumed to be 2·5 per cent per annum. In addition, extra expenditure due to additional projects amounts to K 157 million. It is also assumed that there will be a saving of K 20 million each year which will go towards financing Pyidawtha projects.

TABLE 32.—*Current Expenditure of Ministries and Departments* (1961-62 *to* 1964-65)

	(K million)
1961-62	1,073
1962-63	1,126
1963-64	1,176
1964-65	1,202

(*b*) Receipts of Ministries and Departments are divided into two parts (1) revenue from the collection of taxes such as Customs Duties, Excise, Excise Duties, Taxes on Income and Commercial Taxes and (2) revenue from non-tax sources such as fees and fines.

7. *Tax Receipts.*—Tax rates remaining the same, total revenue from taxes for the four Plan years are calculated to be K 3,556 million or K 889 million a year.

TABLE 33.—*Tax Receipts of the Union Government*

(K million)

— (1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
Customs	332	337	340	340
Excise Duties	111	113	114	115
Taxes on Income	235	240	247	253
Land Revenue	46	46	46	47
Excise	42	44	45	46
Stamps	8	8	8	8
Commercial Taxes	83	84	84	82
Betting Tax and Motor Vehicles ...	13	13	13	13
Total ...	870	885	897	904

(i) *Excise Duties.*—Yield from excise duties consists of revenue from motor spirit, kerosene, sugar, cigarettes, matches, salt and silver, and total excise duties for the four years are estimated at K 111 million, K 113 million, K 114 million and K 115 million.

(ii) *Taxes on Income.*—These consist of Income-tax, Super-tax and Business Profits tax. Income-tax and Super-tax on wages and salaries are K 13 million, K 14 million, K 15 million and K 16 million respectively for the four years of the Plan period while Income-tax and Super-tax collected from companies is estimated at K 83 million, K 85 million, K 90 million and K 95 million respectively. In addition, tax collections from Boards and Corporations are estimated as K 119 million for 1961-62, K 121 million for 1962-63 and K 122 million each for the following two years. Expected receipts from Business Profits tax is K 20 million each for the Plan years. Therefore total Taxes on Income will be K 235 million, K 240 million, K 247 million and K 253 million respectively.

TABLE 34.—*Revenue from Income-Tax*

(K million)

(1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
Income-tax and Super-tax—				
Wages and Salaries	13	14	15	16
Companies	83	85	90	95
Boards and Corporations ...	119	121	122	122
Total Income-tax	215	220	227	233
Business Profits tax	20	20	20	20
Total Taxes on Income ...	235	240	247	253

(iii) *Commercial Taxes.*—These consist of Entertainment tax, the Hotel and Restaurant tax, Business Premises tax and Sales tax, revenue from which is estimated as follows :—

TABLE 35.—*Revenue from Commercial Taxes*

(K million)

(1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
Commercial Taxes—				
Entertainment	8	8	8	9
Hotel and Restaurant	2	2	2	2
Business Premises	3	3	3	3
Sales	70	71	71	68
Total ...	83	84	84	82

8. *Non-tax Receipts.*—These consist mainly of fees, fines and sales of goods and services. Also included under this head are fees for import licences, interest receipts, and the government's share of profits of the Union Bank of Burma. They are expected to bring in an annual average of K 254 million over the four-year period.

9. On the basis of the above estimates, the current surplus of the Ministries and Departments will be as follows :—

TABLE 36.—*Summary of Current Budget of Ministries and Departments* *

(K million)

(1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
a. Receipts	1,124	1,139	1,151	1,158
Tax Receipts	870	885	897	904
Non-tax Receipts	254	254	254	254
b. Expenditure	1,073	1,126	1,176	1,202
c. Deficit (–) Surplus (+) ...	+51	+13	– 25	– 44

* Excluding contribution from SAMB.

10. A more detailed picture is given below :—

TABLE 37.—*Union Government Ministries and Departments Current Budget (1961-62 to 1964-65)*

(K million)

(1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
I. RECEIPTS **Total** ...	**1,124**	**1,139**	**1,151**	**1,158**
A. Taxes	**870**	**885**	**897**	**904**
Customs	332	337	340	340
Excise Duties	111	113	114	115
Taxes on Income	235	240	247	253
Land Revenue	46	46	46	47
Excise	42	44	45	46
Stamps	8	8	8	8
Commercial Taxes	83	84	84	82
Motor Vehicles Tax ...	13	13	13	13
Betting Tax				
B. Non-Tax Receipts	**254**	**254**	**254**	**254**
Defence	5	5	5	5
Posts and Telegraphs ...	26	26	26	26
State Lottery	12	12	12	12
Other	211	211	211	211
II. EXPENDITURE ...	**1,073**	**1,126**	**1,176**	**1,202**
III. CURRENT SURPLUS (+)/DEFICIT (–)	**+51**	**+13**	**– 25**	**– 44**

Current Surplus of Boards and Corporations

11. The normal increase of current expenditure of Boards and Corporations is assumed to be 3 per cent per annum. It is also assumed that the current surplus of all Boards and Corporations will rise by K 8 million each year. However, because of the rise in expenditure due to new projects and the shortfall in expected receipts of the State Timber Board compared to the Draft Outline, receipts are expected to rise from K 2,371 million in 1961-62 to K 2,588 million only in 1964-65 and the combined current surpluses of all Boards and Corporations will be K 172 million in 1961-62, rising to K 178 million only in 1964-65 in which year some of the new industrial projects will bear fruit.

TABLE 38.—*Current Surplus of Boards and Corporations*

(K million)

Year	Receipts	Expenditure	Current Surplus
1961-62	2,371	2,199	+172
1962-63	2,438	2,265	+173
1963-64	2,510	2,335	+175
1964-65	2 588	2,410	+178

Capital Receipts of Boards and Corporations

12. These consist mainly of sale of old stock and the amount is assumed to be K 10 million for each year of the Plan period.

Other Receipts

13. Under this head is included dividends on investment, miscellaneous debt, depreciation and other reserve funds, and depreciation of Boards and Corporations.

TABLE 39.—*Other Receipts*

(K million)

(1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
1. Dividends	9	10	10	11
2. Depreciation and Other Reserve Funds	4	5	5	5
3. Miscellaneous Debt *	31	31	31	31
4. Depreciation of Boards and Corporations.	34	34	34	34
5. Net receipts from Agriculturists, etc.	4	2	2	1
Total ...	82	82	82	82

* Adjusted for double counting of Savings Certificates bought by Boards and Corporations.

(i) *Dividends.*—There are receipts from investment, *i.e.*, on shares purchased from the Burma Corporation (1951) Limited, the Burma Oil Company (1954) Limited (Joint Oil Venture), and the State Commercial Bank.

(ii) *Depreciation and Other Reserve Funds.*—Consist mainly of Savings Certificate Bonus Fund.

(iii) *Miscellaneous Debt.*—These are net receipts from Post Office Savings Bank Deposits, Post Office Cash Certificates, Savings Certificates and State Provident Funds.

(iv) *Depreciation of Boards and Corporations.*—These are depreciation funds of the Union of Burma Railway Board, the Board of Management for the Port of Rangoon and the Inland Water Transport Board.

C. External Resources for the Public Sector

Foreign Exchange Budget

14. Total foreign exchange earnings from domestic production for the four years is K 5,328 million, of which K 4,334 million is government earnings and K 994 million private.

15. As in the past two plans, the Union will continue to depend on foreign loans and grants to finance a considerable part of her developmental expenditures. For the Second Four-Year Plan, total available resources are estimated at K 1,846 million of which K 809 million or 44 per cent will come from foreign sources.

TABLE 40.—*Foreign Loans and Grants for the Four-Year Plan (1961-62 to 1964-65) for the Public Sector*

	(K million)
China	176
ICA	187
IBRD	66
Reparation	380
Total ...	809

16. Except for receipts under Japanese Reparations, receipts from the other three sources are the result of the recently signed loan agreements. Public sector will receive K 176 million (the total amount contracted is K 400 million) worth of machinery, equipment and technical assistance from China during the four years. The loan from ICA is to finance the building of a highway between Rangoon and Mandalay. The new loan from the World Bank will be utilized for the purchase of diesel electric locomotives and spare parts. K 33 million of this loan will be drawn annually during the first two years of the Plan period. The Union will also continue to receive annually K 95 million worth of Japanese Reparations in the form of goods and services in the four years.

17. Another source of foreign receipt is from non-trade items averaging K 130 million a year. These consist of receipts from tourist travel, agency commission, foreign embassy expenditures, repairs of foreign shipping and purchase of ships stores by foreign ships.

18. Foreign payments consist of (1) the foreign exchange component of the government's capital programme amounting to an average of K 321 million a year or 49 per cent of total development expenditure and (2) the import programme for the private sector.

19. Non-hut private gross capital formation in 1959-60 was K 260 million. Of this, K 124 million is the foreign component, amounting to 47 per cent of the total. Under the Second Four-Year Plan, because of grants of foreign loans to the private sector for capital formation, the percentage is expected to increase to 50 per cent. Since non-hut private gross capital formation from 1961-62 to 1964-65 is K 522 million, K 567 million, K 622 million and K 689 million, the foreign exchange component is K 261 million, K 283 million, K 311 million and K 344 million for the four years.—

20. *Foreign Debt Servicing*.—Repayment of interest and principal will be as follows :

TABLE 41.—*Foreign Debt Servicing*

(K million)

—— (1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
(*a*) India	25	24	23	22
(*b*) IBRD	9	9	15	16
Port ...	6	6	6	6
Railways ...	3	3	9	10
(*c*) Pakistan ...	11	...	...	...
Total ...	45	33	38	38

Implications

21. Public sector capital expenditure for four years is estimated at K 2,629 million or approximately K 657 million for each year of the Plan period. Of this, K 321 million or approximately 49 per cent will be foreign exchange expenditure.

TABLE 42.—*Capital Development Expenditure in the Public Sector*

(1961-62 *to* 1964-65)

(K million)

—— (1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)	Total (6)	Average of four years (7)
Total	661	712	676	580	2,629	657
Foreign Exchange ...	322	368	335	260	1,285	321
Kyat	339	344	341	320	1,344	336

22. Against the total planned development expenditure of K 2,629 million as shown above, total available resources is K 1,846 million.

TABLE 43.—*Financial Requirements and Availabilities for the Second Four-Year Plan in the Public Sector*

(K million)

Year	Requirements	Availabilities	Gap
1961-62	661	496	165
1962-63	712	497	215
1963-64	676	444	232
1964-65	580	409	171
Total ...	2,629	1,846	783
Average ...	657	461	196

23. If capital expenditure is set at the level of K 657 million crores a year, the deficit of the Government Sector inclusive of Boards and Corporations is K 783 million for the four years or K 196 million a year. Foreign and domestic components of the budget deficit will be as follows:—

TABLE 44.—*Foreign and Domestic Components of the Budget Deficit*

(K million)

Year	F.E. deficit (–)	Kyat deficit (–)	Total budget deficit (–)
1961-62	– 216	+51	– 165
1962-63	–154	–61	– 215
1963-64	–88	– 144	– 232
1964-65	+53	– 224	– 171
Total Plan Period ...	–405	–378	–783
Annual Average ...	– 101	–95	–196

24. The Comprehensive Budget of the Government Sector and the Foreign Exchange Budget are shown below:—

TABLE 45.—*Comprehensive Budget of Government Sector*

(K million)

—	1961-62	1962-63	1963-64	1964-65
A. RECEIPTS Total	**3,768**	**3,888**	**3,955**	**4,021**
1. Revenue Receipts	1,124	1,139	1,151	1,158
2. Loan Receipts	131	168	151	131
(*a*) Foreign	92	130	113	94
(i) ICA	24	59	56	48
(ii) IBRD	33	33	...	...
(iii) China	35	38	57	46
(*b*) Domestic	39	38	38	37
(i) Depreciation and Other Reserve Funds	4	5	5	5
(ii) Miscellaneous Debt	31	31	31	31
(iii) Agriculturists, etc.	4	2	2	1
3. Other Receipts	142	143	143	144
(i) Dividends	9	10	10	11
(ii) Reparations	95	95	95	95
(iii) Capital Receipts of Boards and Corporations	10	10	10	10
(iv) Depreciation of Boards and Corporations	34	34	34	34
(v) Loan Repayment *	– 6	– 6	– 6	– 6
4. Current Receipts of Boards and Corporations	2,371	2,438	2,510	2,588
B. EXPENDITURE Total	**3,933**	**4,103**	**4,187**	**4,192**
1. Current Expenditure	3,272	3,391	3,511	3,612
(*a*) Ministries and Departments	1,073	1,126	1,176	1,202
(*b*) Boards and Corporations	2,199	2,265	2,335	2,410
2. Capital Expenditure	661	712	676	580
C. SURPLUS (+)/DEFICIT (–)	**– 165**	**– 215**	**– 232**	**– 171**

* Excludes loan repayment included under item B. 1. (*a*).

TABLE 46.—*Foreign Exchange Budget*

(K million)

	1961-62			1962-63			1963-64			1964-65		
(1)	Total (2)	Government (3)	Private (4)	Total (5)	Government (6)	Private (7)	Total (8)	Government (9)	Private (10)	Total (11)	Government (12)	Private (13)
A. TOTAL RECEIPTS	1,525	1,217	308	1,661	1,338	323	1,730	1,391	339	1,832	1,477	355
I. Trade	1,191	960	231	1,285	1,043	242	1,368	1,113	255	1,484	1,218	266
II. Non-Trade *	130	70	60	130	70	60	130	70	60	130	70	60
III. Loans and Other	204	187	17	246	225	21	232	208	24	218	189	29
(*a*) China	52	35	17	59	38	21	81	57	24	75	46	29
(*b*) Reparations †	95	95	...	95	95	...	95	95	...	95	95	...
(*c*) IBRD	33	33	...	33	33	...	...	...	...	...	...	...
(*d*) ICA	24	24	...	59	59	...	56	56	...	48	48	...
B. TOTAL PAYMENTS	1,741	647	1,094	1,815	691	1,124	1,818	672	1,146	1,779	607	1,172
I. Trade ‡	1,486	492	994	1,572	548	1,024	1,570	524	1,046	1,531	459	1,072
(*a*) Consumer	903	170	733	921	180	741	924	189	735	927	199	728
(*b*) Producer	583	322	261	651	368	283	646	335	311	604	260	344
II. Non-Trade §	210	110	100	210	110	100	210	110	100	210	110	100
III. Repayment of Loans	45	45	...	33	33	...	38	38	...	38	38	...
(*a*) India ‖	25	25	...	24	24	...	23	23	...	22	22	...
(*b*) IBRD ‖	9	9	...	9	9	...	15	15	...	16	16	...
(*c*) Pakistan ¶	11	11	...	...	...	...	...	...	...	...	...	...
C. DEFICIT(−)/SURPLUS(+) ...	−216	+570	−786	−154	+647	−801	−88	+719	−807	+53	+870	−817

* Estimated by CSED—based on receipts for the past three years.
† Reparations Agreement.
‡ Private imports estimated by CSED.
§ Estimated by CSED—based on payments for the past three years.
‖ Repayment Schedules.
¶ Shipment of rice by SAMB.

2. FINANCING THE GAP

25. The foreign exchange gap of K 405 million can be filled by receipt of additional Japanese Reparations, borrowings from the Development Loan Fund (DLF), the International Bank for Reconstruction and Development (IBRD), and credits and grants from other sources, foreign private capital, etc. However, since the foreign exchange deficits occur in sizable amounts in the earlier years, the urgency of starting negotiations to secure additional foreign resources has been recognized and appropriate machinery set up.

TABLE 47.—*Foreign Exchange Deficit*

(K million)

	Foreign Exchange Deficit.
1961-62 ...	– 216
1962-63 ...	– 154
1963-64 ...	– 88
1964-65 ...	+ 53
Total	– 405

26. Assuming that the foreign exchange gap were filled half by grants and private foreign capital and the other half by additional loans at an average interest rate of 5½ per cent repayable in 15 years, annual foreign debt servicing burden for the Plan period as well as for the subsequent 10 years is re-calculated. The highest level of foreign debt servicing burden during the Plan period, which will fall in 1964-65, is still less than 4 per cent of current foreign exchange earnings of the economy. The highest point during the subsequent 10 years is expected to be reached in 1970-71 (the year when repayment of Chinese loan begins) but its ratio to current foreign exchange earnings of the economy (even while assuming that the latter had not risen since 1964-65) would still be less than 7 per cent.

27. If the foreign exchange gap were filled, the following overall picture of national income, consumption and investment would emerge for the Plan period.

TABLE 48.—*National Income, Consumption and Investment under the Plan*

		(K million)	
Gross Domestic Product ...		28,934	
Government consumption ...		4,578	(15·8% of GDP)
Private consumption ...		19,351	(66·9% of GDP)
Savings ...		5,005	(17·3% of GDP)
Capital formation—			
Fixed ...	5,777	6,156	(21·3% of GDP)
Stock increase ...	379		
Net inflow of foreign resources ...		1,151	(18·7% of Capital Formation)

28. Generally speaking, aggregate savings in the private sector should be sufficient to provide the investment expected of it under the Plan. In the past, however, the investment demand of the private sector appears to have fallen short of private savings. For example, income velocity declined from 4 in 1954-55 to 3·1 in 1959-60. (An income velocity of 4 means,

as its reciprocal, a ratio of money supply to GDP of 25 per cent). Assuming that an income velocity of 4 is quite sufficient for normal transaction, then money supply to the extent of 25 per cent of GDP would be utilized for transaction purposes and the rest may be regarded as idle balances as shown in the table below.

TABLE 49.—*Estimate of Idle Balances*

(K million)

Fiscal Year	Gross National Product	Active Balances *	Total Money Supply †	Idle Balances
1954-55 ...	4,812	...	1,191	...
1955-56 ...	5,150	1,288	1,548	260
1956-57 ...	5,451	1,363	1,605	242
1957-58 ...	5,359	1,340	1,535	195
1958-59 ...	5,558	1,390	1,824	434
1959-60 ...	5,972	1,493	1,900	407

* 25 percent of GNP.
† Average during period.

29. As long as these idle cash balances remain really "idle" or are used to purchase capital imports, they present no problem of inflation. To the extent that they are activated to buy domestic goods and services, they will generate inflationary pressures. Or worse still, if they are used for speculative purposes, as is suspected of some part of the increase in private money supply in the past. In as much as speculative money can be transferred to productive investment, inflationary pressures will be lessened. To realize the Plan's private investment targets, it will be necessary to devise measures to induce the full amount of private investment demand. It may also happen that the savings of the private sector do not emerge at the points where private investment is to take place. The Government may therefore have to step in through monetary institutions to channel some private savings where they are required.

Financing Private Investment

30. The following table shows the investment that has taken place in the private sector in the seven years from 1953-54 to 1959-60.

TABLE 50.—*Fixed Capital Formation in the Private Sector*

(K million)

1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60
393	344	433	509	602	583	526

The trend shown by these figures indicates a steady increase up to 1957-58. The statistical trend fits the economic picture. In the early years the private sector lacked capital and those with capital were diffident or inexperienced. Then the momentum gathered, reaching a peak in 1957-58. The years 1958-59 and 1959-60 were not propitious for the expansion of private or public industry; hence the retardation.

31. The magnitude of the future task depends on which figure is taken as a point of departure. If 1959-60 is taken as the starting point, *i.e.*, with K 289 million of private net fixed capital formation as the base and the average figure of K 540 million for the Plan period is set as the goal, then the task is very heavy. It becomes or appears to become much heavier if the target is set at K 640 million shown as required in 1964-65. The gap to be made up becomes less alarming if the 1957-58 figure of K 372 million is adopted as base. A sectorwise inspection of the data in Table 29 shows that the range of variations is greatest in the industry, transport and others sector. Furthermore the gap is largest in this sector. The final conclusion is that the gap does exist and that a tremendous effort must be made in the sector mentioned above. A study must be made to see what problems this sector faces.

Difficulties faced by Private Enterprise

32. The difficulties faced by private enterprise may be summed up as :

(*a*) Lack of finance.
(*b*) Lack of foresight and knowledge of the market.
(*c*) Relations with the administration.

The administration looms large in the life of private business because of policy and also because of expediency. The ownership pattern in the past has been such that the nationals had to be given aid and protection at almost every step. The policy practised during the past ten years or so has created the beginning of an indigenous entrepreneurial group. If this policy is pursued further it is expected that a class of able and confident businessmen will be created making obsolete the present regulations. However since a certain degree of growth has been achieved a review and revision of past policies may improve the situation. The technical details of public administration can also be improved within the context of this policy.

33. Reference is made to such controls on exchange payments and receipts, customs administration, etc., as administrative tools of expediency. That is, these regulations and controls over foreign exchange arise not because they are desired in themselves but generally speaking they are caused by some other policy. Nevertheless the result is the same. They stand in the way of smooth business transactions. Being essential they cannot be removed. Given the context of a shortage of exchange they must exist, but methods could be streamlined. The same applies to customs administration, price controls, and issue of raw materials.

34. One of the observed habits of entrepreneurs in the Union is they all flock to an industry or any other venture in force. They play "follow the leader" and some observers complain against this habit. But from the point of view of a person who cannot undertake market research because of its cost in time and money, his only guide is to listen to and follow those who might have access to information on investment possibilities. They do not have knowledge of the possibilities independent of others. Therefore the Government will undertake industrial possibility surveys for large and small business enterprise. It intends to set up institutions for promoting entrepreneurial initiative in the urban and rural areas as well as for big and small business.

35. One of the most important common problems of manufacturing concerns is shortage of capital particularly working capital. They need working capital to hold stocks of raw materials, pay wages in advance and to give credit to their customers. Credit from commercial banks is limited because of the risk involved. From a banker's point of view the industrialists in general are not creditworthy in terms of methods and techniques of business administration. Census data show that private sources account for 68 per cent of the industrial loans; 10 per cent from commercial banks and 15 per cent from the State. With gold and jewellery security the rate of interest is about 24 per cent and with unsecured loans it could go as high as 60 per cent. The financial bottleneck must therefore be removed to promote the growth of native industry. The Industrial Bank which is now proposed will benefit large-scale industry. Its creation will be expedited. A small Industry and Business Bank is also being considered to cater to small industrial and other concerns. Then one gap in the financial structure will be closed.

36. In the past five years, nationals have purchased shares in large private firms and in joint ventures. Foreign private business will also be coming to the Union in increasing numbers. If joint ventures of foreign and local capital are to take place then a stock exchange could be a useful means of promoting these partnerships. It may not be too early to explore the feasibility of such institutions under Government patronage.

37. The State intends to expedite the process of economic development by actively assisting the private sector in a variety of ways. To generalise, such assistance will come about through:

(*a*) adapting the system of public administration to attain this goal in areas which impinge directly on the activities of private enterprise;

(*b*) setting up new and/or expanding existing financial agencies to mobilise savings and credit, and

(*c*) setting up institutions for promoting entrepreneurial initiative in the urban and rural as well as in big and small business.

38. In giving such assistance a specific area such as cotton textiles should be chosen as the hard core of investment for the private sector. To this hard core all-out government help and other facilities will be given. Such an area is chosen for reasons of (1) private profitability, (2) employment effect, (3) balance of payments effect, and (4) the external economies effect. It is expected that in a few years output of cotton textiles will be enough to meet the domestic needs at least in about four or five essential items. To meet these aspirations the Union Government is prepared to:

(1) set aside sufficient amount of foreign exchange or loans for the import of raw materials and machinery,

(2) provide technical assistance,

(3) make necessary changes in fiscal policy,

(4) make necessary changes in the import and distribution systems for raw materials and machinery,

(5) set up an Industrial Bank, and

(6) pursue a vigorous cotton production drive.

39. The private sector may also look forward to securing some share of the Chinese loan, additional Japanese reparations, other foreign credits, funds from the Industrial Development Bank, etc. Given the existence of idle cash holdings, loan possibilities from abroad, a certain amount of private foreign capital induced by the Investment Act of 1959, and other guarantees and inducements, private capital formation may reach the levels indicated earlier if the policy of nurturing private enterprise is implemented with vigour.

3. FISCAL POLICY

40. In an attempt to transform the structure of the economy to a pattern capable of yielding progressively greater returns in the future, it is unavoidable that the economy would have to undergo a certain amount of stress and strain, particularly in the initial stages of development. The size of the development programme and the magnitude of the resources gap indicate the degree of the stress that the economy will experience. In this connection it may be pertinent to review the pattern of financing development programme during the four years 1952-53 through 1955-56 and during recent years from 1956-57 through 1958-59.

41. Consequent to the fall in the export price of rice and to the absorption of increases in tax revenues by rising current expenditures, the expenditure gap of the public sector was largely closed by recourse to foreign exchange reserves held abroad. Thus during the first four years of the investment programme as much as 84 per cent of the required financial resources was met by deficit financing. In the second year of that period, deficit financing was largely in the form of withdrawals from foreign exchange balances. Thereafter when it was no longer safe to draw upon foreign exchange reserves, resort was made to borrowing from banks. As a result, private money supply rose by 119 per cent between 1952-53 and 1955-56 bringing about pressures on domestic price stability and strains on balance of payments. Were it not for the preference of the general public to hold currency rather than bank deposits, the secondary expansion of bank credit would have been much greater than the present small amount of bank credit. During recent years the pattern of financing was in the direction of foreign resources. Loans and reparations receipts accounted for 66 per cent while deficit financing constituted 27 per cent of financial resources.

TABLE 51.—*Financing the Expenditure Gap of the Public Sector*

(K million)

— (1)	1952-53 (2)	1953-54 (3)	1954-55 (4)	1955-56 (5)	Cumulative (6)	Percentage (7)	1956-57 (8)	1957-58 (9)	1958-59 (10)	Cumulative (11)	Percentage (12)
Borrowing from the public	5·7	14·5	23·6	51·3	95·1	6·9	13·2	28·4	28·2	69·8	7·1
Foreign loans and grants	27·0	10·0	2·0	87·4	126·4	9·3	247·0	248·0	157·3	652·3	65·9
Deficit Financing	24·2	522·4	488·8	112·6	1,148·0	83·8	7·0	54·0	206·0	267·0	27·0
(*a*) Borrowing from banks (+) ...	27·2	168·2	471·8	285·6	...	...	−94·0	150·0	259·0	...	...
(*b*) Draw-down of cash balance (+) ...	−3·0	354·2	17·0	−173·0	...	...	101·0	−96·0	−53·0	...	...

TABLE 52.—*Financing the Capital Expenditure of the Public Sector*

(K million)

— (1)	1952-53 (2)	1953-54 (3)	1954-55 (4)	1955-56 (5)	Cumulative (6)	Percentage (7)	1956-57 (8)	1957-58 (9)	1958-59 (10)	Cumulative (11)	Percentage (12)
Government Savings	271	177	161	194	803	36·9	192	142	44	378	27·7
Borrowing from the public	6	15	24	51	96	4·5	13	28	28	69	5·1
Foreign loans and grants	27	10	2	87	126	5·8	247	248	157	652	47·7
Deficit Financing	24	522	489	113	1,148	52·8	7	54	206	267	19·5
(*a*) Borrowing from banks (+) ...	27	168	472	286	953	...	−94	150	259	315	...
(*b*) Draw-down of cash balance (+) ...	−3	354	17	−173	195	...	101	−96	−53	−48	...
Total ...	328	724	676	445	2,173	100·0	459	472	435	1,366	100·0

42. A growing economy often generates excessive demand on resources, and to some extent it is necessary. Rising prices usually increase profit prospects which in turn bring about increased investment and expansion in the private sector. Moreover, rising wages facilitate mobility of labour which is vital to technical innovations and development. However, this should not be construed as being impervious to the dangers of inflation. This goes without saying for the disaster type of inflation, such as may be found in the wake of war finance. Even the dangers from a moderate type of inflation as was experienced in this country in the years 1954 through 1956 should not be taken lightly. Such moderate type of inflation, if continued sufficiently long enough may very well undermine the development programmes and defeat the ends aimed at, in addition to creating inequities among various groups in the economy.

43. Inequities resulting from an inflation are most serious in a country like Burma where income is fixed for the majority of the population which includes paddy growers and salary earners. Excess of demand therefore should be held in check. Fiscal policy for the Plan will therefore be aimed at obtaining adequate resources for implementing the Plan, while maintaining overall stability and at the same time providing incentives to the private sector to step up investment. Both the revenue and the expenditure policies will be orientated towards these objectives.

44. To meet these objectives the following three things must be accomplished on the revenue side : (1) revision of tax rates, (2) improvement in the structure of tax system and (3) improvement in tax administration.

45. In revising the tax rates not only the increased revenue but also the effect on private investment and equity, as always, should be considered. As already pointed out earlier the income of the rural population is already too low to bear any extra burden of taxation of any kind. On the other hand there appears to be some room for additional tax burden among the urban population. Returns from the most recent Census (1953-54) which covered 253 towns and 2,000 village-tracts around the towns indicate that during the Census year average urban worker earned K 1,102 whereas his rural counterpart earned only K 502. Income of the urban worker is on the average more than double that of a rural worker. Additional taxation of the urban population would therefore reduce inequality of income between rural and urban populations in addition to bringing about increased revenue.

46. Improvement in the tax structure should be in the direction of (1) transferring the tax base more and more to domestic production from foreign trade and of (2) implanting a built-in flexibility into the tax structure.

TABLE 53.—*Major Categories of Tax as Percentage of Total Revenue Receipts*

—— (1)	1952-53 (2)	1953-54 (3)	1954-55 (4)	1955-56 (5)	1956-57 (6)	1957-58 (7)	1958-59 (8)
Taxes on Imports ...	30·8	30·7	27·0	33·4	32·8	30·9	28·7
Rehabilitation Contribution	42·4	45.8	48·0	26·6	29·3	22·0	14·4
Sub-Total ...	73·2	76·5	75·0	60·0	62·1	52·9	43·1
Domestic Taxes ...	15·7	14·0	15·7	26·7	22·0	27·3	32·9
Non-Tax Revenue ...	11·1	9·5	9·3	13·3	15·9	19·8	24·0
Total ...	100·0	100·0	100·0	100·0	100·0	100·0	100·0

47. The chief characteristic of the present tax structure is the fact that the main sources of revenues are derived from foreign trade transaction in such form as customs duties, sales-taxes and rehabilitation contributions. During the past six years taxes on imports ranged from 27 per cent to 33 per cent. Rehabilitation contributions inclusive of taxes from Boards and Corporations, accounted for an average of 45 per cent of revenue receipts in the first two years, but dwindled to 18 per cent on the average during the years 1957-58 through 1958-59. The dependence of revenue receipts on foreign trade to this extent is definitely undesirable, for it renders the development programme extremely vulnerable to changes in foreign trade particularly in the export price of rice which amounts to about 80 per cent of total value of exports. Undesirable as it is the transformation of the tax base is likely to be slow. It is not intended that absolute amount of revenue from foreign trade should shrink but its relative importance in the tax structure should decrease.

48. By a built-in flexibility is meant an automatic response in tax revenues to changes in incomes of the people. When income rises tax revenue rises in greater proportion. This curbs consumption and hence total demand. A built-in flexibility in the tax system would be very useful in countries like Burma where income is continually rising and where total demand tends to be excessive because of the development programmes being implemented. The effectiveness of built-in flexibility, however, could easily be overemphasized. Even in countries like the US where this mechanism is greatly developed, it alone is not sufficient to curb excessive demand during inflationary periods. Nevertheless implanting this mechanism in our tax system would go a long way in improving the present tax system. This built-in flexibility would surely improve with the improvement of the relative importance of the income-tax. As a matter of fact this mechanism is inherent to some extent in any progressive tax system. From this view point also it is important to increase the role of all progressive taxes in the tax structure.

49. Improvement in the tax administration is also an urgent need. In particular the income-tax administration calls for immediate attention. With more efficient administration a good amount of increase in tax revenue can be expected from this source, particularly from increased collection from the private sector. There no doubt exists a large room for improvement in the assessment of incomes of professionals and unincorporated business units. It does not appear that major revision of existing tax laws is needed for this purpose. Only a stricter enforcement of these laws is necessary. Perhaps the strength of the department need to be increased.

50. It also appears to be desirable to integrate the administration of all excise taxes excepting customs duties, but including commercial taxes. This would make tax administration easier and more efficient as well as save some cost.

51. The two most important things on the expenditure side of fiscal policy are (1) to keep current expenditure within the bounds of current revenue and (2) to keep the capital programme flexible. Current expenditure has been growing yearly. To some extent this is unavoidable. However, there is a noticeable tendency for current expenditure to outstrip the growth of current receipts. Needless to say, this tendency need to be checked since current deficit means less amount of resources is available for investment which is essential for development.

52. Flexibility in capital programme is needed in order to even out possible excessive demand in accordance with the degree of success in performance of the Plan as well as with seasonal variations of the economy. With an inflexible capital programme there is a danger that unduly excessive demand on resources appears at one time and then unduly slack demand at another time in the same year, resulting in misallocation and in waste of resources. Implementing agencies should keep certain projects marked as marginal, implementation of which

can be postponed for some time. They should also have plans ready to rephase implementation of other projects.

Limitations of Controls and Regulations as Anti-Inflationary Measures

53. The most potent source of inflation in Burma arises from the attempt to accelerate the pace of development by resort to deficit finance in order to add to capital facilities needed for development. To maintain the real consumption of lower income groups systems of price controls and rationing were devised so that goods are made available according to the needs and not according to the ability to pay. If the excess of demand for the controlled commodities is moderate, there is not much harm in permitting consumption to be reduced arbitrarily by the exclusion of some buyers who arrive at the moment when supply is exhausted. But on the other hand, if the excess of demand is considerable, the system of price controls would inevitably create black markets. Under such circumstances, to make the controls effective, it becomes necessary to extend the regulatory system more and more.

54. Although an extensive price control is bound to result in failure, yet in the early stages of development it is necessary to allocate scarce resources as closely as possible to the pattern of priorities set out in the Plan.

4. MONETARY POLICY

Past Behaviour of Money and Achievement by the Central Bank in Controlling Money and Credit in the Country

55. The agency responsible for the formulation and implementation of monetary policy is the Union Bank of Burma. Since one of the objectives of establishing the Union Bank of Burma is to ensure internal stability, it may be worthwhile to see how the Union Bank in the past succeeded in controlling inflationary pressures arising out of high developmental expenditures. The main cause of inflation which lasted from mid 1954-55 to the end of 1956-57, was the deficit financing of the Government to carry out its Eight-Year Development Programme launched in 1952. This Programme aimed to attain higher standard of living and high levels of output. On the other hand, large monetary expansions created by this deficit financing were not mopped up by means of increases in the availability of consumer goods. Government actively took part in the development of the country by creating many State-Managed Boards and Corporations the object of each being to develop a certain sector of the economy. They were allowed to borrow by selling their securities guaranteed by the Government to the banking system. Over 90 per cent of these securities were sold to the Union Bank and these borrowings increased from K 18 million in 1953-54 to K 359 million in 1956-57. The borrowings of the Boards and Corporations to finance their development projects were only 6 per cent of the total internal public debt of the Government complex in 1953-54 ; this ratio rose to 35 in 1956-57. Borrowings of Government proper also rose during this period.

56. Thus, both Government proper and State enterprises borrowed heavily from the Union Bank to finance the development projects while on the other hand tax receipts were not proportionately increased. This led to large injections of money by the Government into the private sector during the eight years. Free import of goods resulted in a large volume being imported and sold for kyats by hoarders of and speculators in commodities. For the first two and a half years of the Eight-Year Plan period, although there were large cash deficits, consumer goods also were abundant on account of the liberal import policy followed by the Government. All essential goods could be imported under Open General Licence ; even licences for luxury goods were granted freely. The Government at that time expected substantial foreign exchange earnings from the export of rice. But the export price

of rice declined by 26 per cent during that period. The imports, however, were maintaind at a high level. The result was that the foreign exchange reserves of the country went down by K 345 million or 36 per cent during the same period.

57. Section 35 (2) of the Union Bank of Burma Act, 1952, states that " the value of the International Reserve maintained by the Bank shall be an amount not less than 25 per cent of the Bank's liability on account of deposits and currency in circulation." Due to the decline in the foreign exchange reserves, the reserve ratio also went down from 86 per cent at the end of 1951-52 to 58 per cent in mid 1954-55. With a view to prevent it from declining steeply in the following years, drastic action was taken by the Government in March 1955. Tight restrictions were imposed on imports resulting in the drastic decline in imports in 1954-55 and 1955-56. But the cash deficits of the Government complex were highest in 1954-55 and remained high in the following two years. Thus, money supply rose substantially while availability of imported consumer goods declined. Inflation set in and it lasted for about two and a half years from mid 1954-55 to the end of 1956-57. During this period of inflation, the monetary expansion of the commercial banks was also adding to the inflationary pressures. Bank loans to the private sector usually rise in the first half of the fiscal year, especially to finance seasonal rice trade, and the loans are repaid in the second half of the year. During this two and a half year period of inflation, wholesalers retained these loans in order to finance their hoarding of imported goods. As the balance of payments of the country deteriorated, prices of imported commodities rose higher than the cost of hoarding. Bank loans to these hoarding activities were thus stimulating inflation in addition to deficit financing of the Government.

58. The Union Bank stepped into the picture only towards the end of 1956-57 when commercial bank credit to the private sector jumped upwards from its normal volume of the two preceding years. It raised its rate from 2 per cent to 3 per cent on loans and advances against Government securities and doubled the reserve ratio which the commercial banks had to maintain against their deposit liabilities. These measures were taken to prevent excessive credit to hoarders. In the following years hoarders could not easily obtain loans from the commercial banks. They were forced to liquidate their stocks even though there were restrictions on imports. As a result, prices declined. Government also reduced its cash deficit during these latter years. The co-ordination of fiscal, monetary and trade policies took place in these years.

59. Income velocity, which is the quotient of Gross National Product divided by the total money supply, declined from 4 in 1954-55 to 3·1 in 1959-60. The highest rate of decline occurred during the period of inflation. In advanced countries, income velocity usually rises during inflation which curtails the full effectiveness of monetary measures. Had there been effective co-ordination of anti-inflationary measures during these years, the fall in income velocity would have helped them in combating inflation.

Objectives of Monetary Policy

60. Section 4 of the Union Bank of Burma Act, 1952, defines the Union Bank's three main objectives: (1) monetary stability in the Union of Burma, (2) stability of the currency in relation to foreign currencies, and (3) development of the productive resources of the country and a rising level of real income. In short, these three main objectives can be summed up as " economic development with monetary stability," the slogan of modern economics.

Factors to be Considered in the Successful Application of Monetary Policy

61. To achieve development with stability, monetary policy should be framed in the face of the following factors. The first is that the banking habits of the people are less developed—only about 33 per cent of the private money supply is in the form of demand

deposits in the bank and the rest is in the hands of the people. Since there is no organized money market, the scope and effectiveness of the open market operations of the Central Bank are also limited. Interest rates are insensitive to monetary action.

62. Secondly, a prime factor in determining the changes in private money supply is the domestic cash deficit of the Government complex. Government's expenditure formed about 15 to 20 per cent of total Gross National Product. Thus this part of money is out of direct monetary control. The raising of interest rates or tightening of money has an impact on consumption and investment but not on Government expenditure. The Central Bank can however indirectly influence the Government's expenditure by limiting credit to the latter. Since the Government complex depends heavily on the credit of the Central Bank for its developmental expenditure such credit ought to be subject to a proper and mutual understanding between the Government and the Central Bank without which monetary policy would be shorn of its effect.

63. Thirdly, the Central Bank can influence the level of commercial bank credit to the private sector (as it did in the past three years). But commercial bank credit forms only a small part of the private money supply.

64. Fourthly, monetary policy is more efficient in cutting expenditures than in stimulating spending. Therefore, it is more effective in curbing inflation than in curing depression.

65. Finally, it may be claimed that monetary policy is a more flexible tool than fiscal policy. Monetary authorities can act at any time in the course of the year whenever disturbances to stability arise. Changes in fiscal policy need the approval of Parliament *which meets only at intervals*. However response to monetary action is slower than to fiscal action.

Monetary Policy for the Four-Year Plan

66. Since the main objective of the monetary policy is to have "development with stability," the Union Bank should use its power with a view to achieving this goal. Commercial bank credit should not be used for hoarding activities. Banks should finance normal seasonal trade especially rice trade. Recent events suggest that direct purchase of paddy by the SAMB from the farmers pumps more money into circulation than purchase made through millers and traders, because the millers utilize their idle balances to finance part of their purchases and obtain loans to finance the remaining portion. Therefore, direct purchase by the SAMB is more inflationary than the indirect purchase made through millers and traders. Commercial banks should, therefore, be encouraged to finance rice millers for the purchase of paddy from the farmers in the coming four years. Commercial banks should also be encouraged to finance small industrial enterprises. In the past, the banks usually provided short-term credit to the foreign trade. Their lending activities should be widened to include medium-term loans to industrial enterprises pending the establishment of an Industrial Development Bank which will be set up in the near future. However, these should be interim measures before cultivators are able to handle the rice market by themselves.

67. The State Commercial Bank whose growth has been phenomenal should also play a more important role in the coming four years. Since in the future, private sector will depend more on the commercial banks to finance rice trade, the State Commercial Bank is expected to significantly fill this gap. The loans to millers and traders will have to be made in districts where the foreign banks are not willing to open branches. The Bank will therefore continue to open as many branches as possible to handle this business and also to develop banking habit in the districts. The practice of the State Commercial Bank at present is to open a sub-branch (where only lending business is done) first and then if the business conditions prove profitable, the sub-branch is transformed into a full branch (where both the lending of money and accepting of deposits are done). If therefore, the opening of a full branch is not practicable in a

district, the sub-branch will at least be opened to finance the seasonal purchase of paddy by millers and traders.

68. Question of timing is also important in adopting monetary measures. The need for action must be recognized by the Union Bank at once. After that, the Bank must be able to judge which of the three weapons would be most effective to control the economic disturbances in the country. Monetary action should also be implemented in the most effective way. During the period of inflation, the raising of the reserve ratio (in conjunction with moral suasion) had a fairly effective impact on the commercial bank credit to the private sector. In the future however, selective credit controls are likely to play a more important part.

69. Past achievement of monetary policy indicates that the balance of payments difficulty should not be solved by trade policies alone if we also want to maintain internal stability. The co-ordination of fiscal, monetary and trade policies is very important. The deficits in the balance of payments can of course be corrected by imposing restrictions on imports but appropriate fiscal and monetary policies (*i.e.*, reducing Government's deficits and restricting credit) will also be adopted to suppress the inflationary pressures arising out of restrictive trade policies.

5. AUSTERITY DRIVE

70. As mentioned earlier, one method of financing the gap under the Second Four-Year Plan is to exercise economy in Government current expenditures. Since the Government will be imposing a certain amount of austerity on the people for the sake of financing the development plan through additional taxation, it is only fair that it imposes its own discipline on itself. As a matter of fact, the rate of growth of Government expenditures in the past has considerably outstripped the rate of growth of Government revenues, as can be seen in the following table reproduced from the Economic Survey of Asia and the Far East, 1960:—

TABLE 54.—*Indices of Growth of Government Expenditure and Government Revenue*, 1958

(1950=100)

Country.	*Government Expenditure.*	*Government Revenue.*
Burma	278	189
Ceylon *	162	141
China	602	642
Federation of Malaya ...	245	140
India	237	168
Indonesia *	332	225
Japan	287	253
Korea, Southern † ...	787	770
Pakistan	233	147
Philippines *	150	167
Thailand	261	261

* 1951=100. † 1953=100.

71. Apart from its past rate of growth, the composition of Government current expenditures also deserves attention. In the fiscal year 1959-60, the allocation of budgeted

current expenditures of ministries and departments as well as of Boards and Corporations (excluding however their trading expenditures) was as follows:—

TABLE 55.—*Functional Allocation of Government Current Expenditures*

(K million)

	1959-60 B.E.	Per cent.
A. GENERAL SERVICES	580·3	51·69
1. General Administration	124·3	11·07
2. Law and Order (Police, Prisons, etc.)	118·5	10·56
3. Defence	337·5	30·06
B. SOCIAL SERVICES	254·4	22·66
1. Education	134·3	11·96
2. Health	44·0	3·92
3. Social Welfare	76·1	6·78
C. ECONOMIC SERVICES	288·0	25·65
1. Natural Resources (agriculture, forestry, mines, etc.) ...	84·4	7·52
2. Industry	63·9	5·69
3. Commerce	29·8	2·66
4. Transport and Communications	97·5	8·68
5. Construction	12·4	1·10
GRAND TOTAL ...	1,122·7	100·00

72. It will be seen in the above table that general services take up half of total Government current expenditures while the other half is shared almost equally between social and economic services. Adding capital expenditures, a comparison is made of total Government expenditures between ECAFE countries in regard to their functional distribution in the following table:—

TABLE 56.—*ECAFE Countries: Functional Distribution of Government Expenditure*

Item (1)	Burma (1958) (2)	Ceylon (1958) (3)	China (1958) (4)	Federation of Malaya (1958) (5)	India (1958) (6)	Japan (1957) (7)	Pakistan (1957) (8)	Philippines (1958) (9)	Thailand (1959) (10)
1. Economic Services of which: ...	26	31	* 64	20	46	44	34	33	21
Agriculture and Community Development.	8	11	...	7	9	11	9	11	5
Transportation and Communications	6	14	...	8	13	15	10	17	10
Industry	8	6	...	5	17	14	11	3	6
2. Social Services of which: ...	17	38	11	25	16	30	18	32	26
Education	10	15	...	15	8	7	4	24	19
Health	3	9	...	7	3	2	2	6	3
Social Welfare †	4	14	...	3	5	17	12	2	3
3. General Services of which: ...	53	17	* 18	44	27	12	35	26	40
Defence ‡	28	5	* 12	16	13	7	18	15	21
Others	25	12	6	28	14	5	17	11	19
4. Other expenditures of which: ...	4	14	7	11	11	14	13	9	13
Interest on debt	2	3	...	4	4	3	5	2	4
Pensions	2	5	...	...	1	...	...	...	...

* To the extent that heavy industries answering defence needs are also financed from investment allocation to "industry", the share of economic services has swollen, and this has been at the expense of that of general services and of defence.

† Including food subsidies in Ceylon, net transactions of State trading schemes and those relating to the "development assistance from the United States" (mainly food supplies under Public Law 480) in India, and the net transactions of State trading schemes (relating mainly to food distribution) in Pakistan.

‡ Defence outlays financed by foreign military assistance are excluded.

Source: Economic Survey of Asia and the Far East, 1960.

73. Here again, the proportion of general services was found to be highest in Burma at the expense of economic services and particularly social services. However, a shift from general services towards economic and social services is contemplated for the future beginning with the Second Four-Year Plan. Particularly, current expenditures on education and health services may considerably be increased under the Plan. For example, it is estimated that in order to achieve compulsory primary education by 1959 as many as 25,000 additional teachers will be required. Similarly, hundreds of health assistants will be needed to man the projected new rural health centres. Net increases in expenditure may however be avoided if a transfer can be effected to these fields of personnel found redundant as a result of organizational reforms envisaged by the Public Services Enquiry Commission, such as the amalgamation of ministries, integration of ministries with functional departments, staff inspection, etc. An intensive application of O and M measures in various Government offices should also result in economy of current expenditures other than wages and salaries.

CHAPTER VI

POLICY AND ORGANIZATION

1. AGRICULTURE

1. In the programmed production of agricultural goods it is essential that the cultivator be systematically organized. Previously, there had been cultivator organizations but these had been formed along political lines with political objectives and programmes. As a result planned agricultural production in the past had not been successful. In the natural conditions obtaining in the country there is no other way of raising the standard of living of the cultivators, of augmenting their incomes, and of increasing the wealth of the country except through modernized expanded production of agricultural goods and increased productivity per cultivator. To bring this into effect it is necessary to dispose the cultivators in proper economic organizations. This means that the organization of cultivators must be transformed from a political to an economic nature. In attempting to bring this about there must be a rapid transition from the most elementary forms of organization, through forms suited to mechanized agriculture, to those forms which are appropriate for industrialised agriculture. This need for rapid transformation of economic organizations indicate that it may not be necessary to pass through each stage in sequence but that it may be possible to leap to higher forms after an initial educative period.

2. During the Plan period a strong co-operative organization will be established. The co-operative form of organization is not new to Burma. There had existed many farm co-operative societies but their organization had been loosely-knit and sustained guidance had not been made available. Now after a study of the problems connected with agricultural co-operatives Government have formulated new bye-laws for agricultural co-operative societies. The existing co-operative structure will be transformed to bring about a more cohesive form of organization which is able to draw upon continuous guidance of Government and which is at the same time infused with the spirit and principles of co-operation. Additional co-operatives will be established under the new institutional laws.

3. Co-operatives will be charged with primary functions and advanced progressive functions. Primary functions will consist of co-operative cultivation, securing agricultural loans and loans for subsidiary occupations. The co-operatives will undertake measures to enable members to repay these loans in kind if this is desired by the members. Machinery, equipment and other goods required in production will be procured by the co-operatives for their members. The society will also ensure that land use is in consonance with scientific requirements, and that the proper crops suited to the land are grown. Advanced co-operatives will undertake the mechanized preparation of land for farming, utilization of organic and inorganic fertilizers, distribution of better seeds and strains, pest control and weed control, canal and sprinkler irrigation, erection of embankments and drainage systems, double and triple cropping, rotation of crops, mechanized harvesting, use of advanced implements, live-stock rearing, storage, joint marketing, transportation and distribution. The co-operatives will, when possible, undertake the processing of raw material produce to obtain maximum benefit of the added value. The co-operatives will help the cultivator to save, arrange insurance for his crops and cattle and after the basic tasks of production and marketing have been well accomplished the co-operatives will function even as the impulsive force and institution for social, communal, educational and health activities.

4. It is essential that the scheme for multi-purpose co-operatives be implemented as rapidly as possible. To achieve this it is proposed to adopt the following method. There are presently over 2,000 village agricultural banks established within the country. Operation of these banks have afforded the cultivators some education and discipline in the management of economic organizations. If the proposed multi-purpose co-operatives are established in association with village banks beginning with those villages where the banks are already established a more rapid implementation will be possible. Thus, during the Plan period it will be possible to open more than 2,000 co-operatives.

5. The agricultural extension service will be expanded to cover the entire agricultural sector so that ultimately there will be a qualified extension worker for approximately every 5,000 acres. At present an agricultural extension worker serves between 20,000 and 30,000 acres. During the Plan period the number of extension workers will be doubled.

6. Agricultural education of a nature equivalent to in-service training in industry may be provided on the lines of the training now being conducted by the Pyinmana Agricultural Institute. Cultivators of the hinterland attend practical courses at the Institute lasting for six weeks. *Ad hoc* courses on specific techniques are also provided by ARDC and Agricultural Department. Co-ordinated effort in agricultural education and organization will be achieved through a central committee on which are represented the Ministries of Agriculture, Land Nationalization and Education.

7. Multi-purpose co-operatives, education and extension services are designed to improve both the cultivator as well as his methods. In addtion to improve immediately his standard of living as well as to assist in increased production further measures will be taken. An insurance scheme for crops and cattle will be offered to the cultivator to minimize the risks of weather and disease. An increasing volume of agricultural credit will be offered. The Plan provides for agricultural credit rising from K 14 crores in the first year to K 17·5 crores in the last year of the Plan. The rate of interest will also be reduced. At present State Agricultural Bank charges a rate of 6 per cent to the Village Bank which imposes an additional charge of another 6 per cent thus making a total of 12 per cent. Measures are now being taken to reduce the rates to 1½ per cent in each instance so that the cultivator is offered loans at the low rate of 3 per cent. Agricultural loans through General Administration channels too will carry this reduced rate. Another measure to be introduced will stabilize the prices of important agricultural products. At the present prices of paddy, the main crop, and sugarcane are determined by Government. The price for the former in all grades will be enhanced. Sugarcane price will continue to be determined by Government. Also, at present there is established a fund which will be drawn upon by Government to enter the groundnut market should prices fall below a floor considered reasonable by Government. Although there is no formal price guarantee for jute Government market operations have maintained a stable and fair price for jute growers. Alternative measures such as price guarantees, price supports, price stabilization fund, market operations and other methods will be explored to maintain a fair and equitable price for the above products as well as other agricultural products.

2. INDUSTRY

8. Industrialization must be an important technique of an economic policy which has for its objective the diversification of an economy which is too dependent on monoculture. Rice accounts for over 70 per cent of the exports of the country. Moreover, the demand for rice is not elastic. The Union already holds 25 per cent of the international trade in rice

and an even larger proportion of the cheaper varieties. Such dependence on one crop is dangerous. For balance of payment considerations too industrialization should be undertaken. Rising standards of living and development necessitates increased imports of both consumer and capital goods as well as of raw materials. Industry could substitute local production for some of the imports as well as provide through its exports the wherewithals for the purchase of other imports of goods and raw materials.

9. During the Eight-Year Plan the State undertook a large programme of industrialization, and many State manufacturing plants were established. However, due to the scarcity of a strategic resource factor, namely managerial talent, some of these plants could operate only at capacities considerably less than rated. Therefore before further enterprises are underaken during the Second Four-Year Plan period it is realistic to direct the efforts of the State towards improving the operations of the existing enterprises with a view to working them to the limits of their rated capacities.

10. However, there remain the case of those industries which because of their strategic nature the State cannot permit other agencies to undertake. There may also be other types of industries which the private sector will not undertake because their optimum size is too large to suit the resources of the private sector or are industries the private sector prefers not to establish. If the State does not step in to establish these necessary industries there may well arise a vacuum. It is better then that the State undertake to set them up than to permit stagnation to take place. This is especially true of those industries for which the State can obtain skilled managerial and technical personnel either through foreign governments or private organizations.

11. The State will consolidate its present industrial enterprises. It will not establish new industries during the Plan period unless they are of strategic importance, or are of such an optimum size, or are of such a nature as the private sector is not likely to undertake or unless skilled management and technical personnel can be obtained. On the other hand it will actively assist the private sector to lay the foundations of industrialization during the Plan period.

12. A review of economic activity in the past indicates that the private sector has played an important part in investment, production and distribution. At the same time the growth achieved has been neither spectacular nor has it taken place in the most desirable lines. Entrepreneurs in the Union have tended to flock to an industry or venture in force instead of striking out in new lines. The above have been due to a complex of reasons. One reason is the lack of initiative on the part of the domestic entrepreneur. Another reason is the lack of foresight and knowledge of market. Other reasons are lack of finance, lack of technical and managerial skills, and of the limitations imposed by the Administration. Active and determined steps will have to be taken if private enterprise is to be expected to play the role assigned to it under the Plan. The target set for private fixed capital formation net and exclusive of hutments is an annual average of K 54 crores. The investment achieved for the three years 1957-58—1959-60 have been K 37·2 crores, K 35·0 crores, and K 38·9 crores respectively. This shows the magnitude of the task to be performed. It also indicates that both the State and the private sector must make tremendous efforts to meet the target.

13. The State will educate and exhort the private sector to make a more determined effort in industrialization. Investment possibility surveys will be conducted by the State and the results and findings disseminated widely. To provide industrial credit the

Industrial Development Bank will be established as soon as possible. Counterpart funds, Japanese Reparations and Economic Co-operation funds, Chinese Loan proceeds will be made available to the private sector. Government will arrange credits for machinery purchases. The feasibility of setting up a stock market and re-financing corporations will be explored. Arrangements will be made to facilitate the entry of foreign technicians to serve in factories in the country and to train the Union's workers and technicians. The Government will, considering its reserves, increase the allocations on foreign exchange for import licences to meet the machinery and raw material requirements of industry and to ensure a steady supply. Open General Licences for some raw materials will be considered. Government will progressively relax controls and regulations which hamper the free-play of private decision-making and enterprise and measures will be introduced for the speedy processing of papers.

14. In the classification of industries into categories for assignment to the public or private sector the manufacture of arms, ammunitions, explosives, atomic energy, utilities such as the generation of electricity on a commercial scale, and the production of steel should be the exclusive responsibility of the State whereas the residual can be undertaken by nationals, foreigners, or nationals and foreigners in joint enterprise. At the present national industrial effort is still weak and foreign capital entering the country for purposes of investment in industry is still small in volume. If artificial divisions of industries as between those which may be undertaken only by nationals and those which may be undertaken by foreigners are made there may well arise a vacuum in industrial development because of the present weakness of national entrepreneurial effort coupled with the shying away of foreign capital. At the same time it must be recognized that national entrepreneurs in the initial stages require some degree of certainty. They need to know that in some industrial lines, where domestic production has achieved self-sufficiency or near sufficiency, additional plants will not be erected by foreign capital. A similar security should also be provided in those industrial lines which suit the peculiar capabilities of the national entrepreneur. This means that it should be beneficial to draw up a list of industries which should be undertaken exclusively by nationals. Care should be taken that the adoption of such a list does not result in protection being given even before the investment is forthcoming. National entrepreneurs should demonstrate their ability to undertake those industries which are to go into the list. In the drawing up of the list technical requirements of industrial processes should also be taken into account. Residual industries not included in the Government or national lists should be open to national, foreign or joint national-foreign enterprise.

15. Foreign investment is desired because of the capital it brings, the know-how it provides, the techniques and methods it introduces and of the benefits of research that it accords. To attract foreign investment Government has enacted the Investment Act. The Act provides a tax holiday for three years which may be extended partially for a further period. Customs duties on machinery and raw material for three years are waived. Accelerated depreciation is permitted and other privileges are extended. However, the extension of privileges alone will not attract the required volume of investment. There must be an all-round improvement of the investment climate. There must be simplification of procedures and removal of unnecessarily restrictive regulations. Entry and stay of foreign staff must be facilitated. An adequate and regular flow of materials and supplies must be ensured. Relief from double taxation of income must be arranged. Along with these measures a programme of information and promotion must be effected. Investment surveys will have to be conducted to bring to light the investment opportunities of the Union. The results of these surveys must be disseminated widely. Towards this end Government is presently arranging for a

study of investment opportunities to be conducted by a United Nations Team. Related to these measures is the problem of State ownership of enterprises. At the moment there is a shyness of foreign capital to enter the country due to uncertainty about nationalization. To eliminate that uncertainty it will be made clear that the State desires to claim for its exclusive responsibility the undertaking of only certain declared industries while the rest will be open to private enterprise. Concomitantly, the State will not nationalize any enterprise in this large area open to private venture. At the same time the desirability of entering into investment guarantee arrangements with various governments will be considered.

16. For the reduction of disparities of development between various regions, for the spread of technology and industrial discipline, and for the raising of the income of the rural population village and small industries throughout the countryside and medium and long industries at various locations throughout the Union should be established. For rapid development of village and small industries there should be financing schemes, greater allocation of machinery and raw material licenses and a more intensive programme of technical assistance. Government will take active steps to encourage and assist the establishment of village and small industries. The desirability of creating a Small Industry and Business Bank will be explored. The Cottage and Small Industry Division of the Directorate of Industry will be strengthened to implement an intensive programme of technical assistance. The establishment of industrial plants at suitable locations throughout the Union will be encouraged to achieve a balanced development of geographical regions.

3. MINING

17. The Union of Burma has not been able to follow a programme of rehabilitation of its mines and aggressive development of its mineral resources throughout the post-war years due to unsettled conditions, adverse metal markets and law and order problems prevailing in the country. The export of metal and minerals even at its post-war peak in 1954-55 was only about 41 percent of the pre-war 1937—41 average. While the Union used to export annually 203 million gallons of refined petroleum products worth about K 109 million in 1937—41, it had to import all its requirements in the post-war period, until about 1958, when the two refineries in the country could produce just enough to meet the internal demand. Then from 1960 onwards petroleum products again have to be imported. Over 32,000 tons of motor spirit, kerosene and HSD were imported in 1961.

18. During the present Four-Year Plan period, the rehabilitation of existing mines will be encouraged and active steps have been taken to develop the lead, zinc, copper, iron, coal and petroleum resources in the Union.

19. *Petroleum.*—Due to a steady increase in the demand for petroleum products in the country, at about 10 to 15 percent a year, the production of crude oil and refined products cannot catch up with the demand. The crude oil reserves of the known fields in the country are also decreasing with increasing demand for petroleum products. New sources of crude oil therefore have to be discovered expeditiously. It had been estimated that over K 50 crores will be required to explore potential petroleum areas in the Union. The BOC (1954) Ltd. will be spending K 250 lakhs a year during the next four years to explore for new sources of crude oil. In order to find oil quickly and effectively, exploration by other firms in competition with the BOC (1954) Ltd. will be encouraged.

20. The present refining capacities of the Chauk and Syriam refineries are 4,600 and 4,800 barrels a day respectively. In order to meet the ever increasing demands, for petroleum products, new plants will be added to the Syriam refinery to give an additional refining capacity of 500,000 gallons per day. The new plants will be ready for production by 1963-64.

21. *Development of Mineral Resources.*—Under the mining concession laws in force, mining leases up to 20 years are available and the mineral resources in the Union may be developed by private and State enterprises. Where the nature of the undertaking to develop a mineral deposit is too large to suit the resources of national private enterprises, or where public funds are used to develop the deposits, State enterprises may step in to work the deposits. State and private joint ventures with foreign firms will also be encouraged to develop the mineral resources.

22. The Burma Geological Department will be increasing its efforts in mapping and complete the surveys of the mineral resources of the Union during the plan period. Technical information required for the development of mineral deposits will then be published for use by the public. The Mines and Explosives Department will be providing general technical services and advice to promote the development of indigenous mines and also assist the mining industry in general to obtain import licences for the essential mining equipment and supplies. To provide necessary conditions for the growth of the mining industry plans are being made to review the conditions of the indigenous mining industry as a whole and to provide incentives and assistance.

23. *Coal and Iron.*—During the plan period, the development of the new coal seams at the Kalewa Coal deposits will be continued, in addition to expanding the normal production from 25 tons per day in 1960-61 to 400 tons in 1964-65. A proposal for the installation of an integrated Iron and Steel Plant is being submitted to Government as a long-term plan. The time schedule for this Iron and Steel Project is as follows :—

1. Completion of raw material survey by Krupp	End of 1962.
2. Completion of study of the Report	Middle of 1963.
3. Completion of Third Phase of Krupp Report regarding Iron and Steel Industry	Middle of 1964.
4. Completion of Study of the Report	End of 1964.
5. Choice of tender and placing of order for machinery, etc. ...	End of 1965
6. Arrival of machinery, etc., after placing firm order ...	End of 1967.
7. Completion of Project	End of 1970.

24. A team of experts from Krupp Co. with the help of West German Government is making a survey of the quality and quantity of the two major raw materials available for the steel industry, namely iron and coal. This team will make detail survey and investigation of iron deposits at Taunggyi, Maymyo and Mergui areas and coal at Kalewa.

25. *Copper, Lead and Zinc.*—During the Plan period the exploration work of the Monywa Copper belt will be continued. The fall in world market prices for lead and zinc have affected the lead and zinc industry in the Union. The largest lead-zinc producer in Burma is the Bawdwin Mine owned by the Joint Venture Burma Corporation (1951) Ltd. The life of this mine is limited to a few years since the high grade ores are nearly exhausted. In order to lengthen the life of this mine and to develop the Lead-Zinc Industry the Government of the Union of Burma have requested the UN Special Fund for financial assistance. UN Special Fund have recently approved $ 590,200 as its contribution and the Union Government will have to contribute K 11 lakhs to meet the expenditures of this projct.

4. LABOUR

A. Urban

26. Among the factors of production, labour deserves the highest consideration not only from the economic standpoint but also on humanitarian grounds. The objective of man-power or employment policy is to create adequate employment opportunities adjusted to needs of the economy for new entrants to the labour force as well as for the existing unemployed or under-employed, if any. The objective of labour policy is to increase the working power as well as the welfare of each man. Once the potential and actual extent of man-power has been reviewed by a man-power survey and accordingly adjusted labour policy takes over to study man in his relations to work. According to 1953 Census returns, the composition of the labour force was 70 per cent agriculture, 10 per cent industry, 10 per cent trade and 10 per cent miscellaneous. The composition of the urban labour force, one million strong, was as follows:

TABLE 57.—*Urban Labour Force*

1. Crafts production process and related occupations ...	27 percent.
2. Sales and related occupations	27 percent.
3. Service occupations	14 percent.
4. Farming, hunting, fishing and forestry occupations ...	11 percent.
5. Managerial, administrative and clerical and related occupations	10 percent.
6. Operating transport occupations	4 percent.
7. Unidentifiable and armed forces	4 percent.
8. Professional, technical and related occupations ...	3 percent.
9. Mining, quarrying and well-drilling occupations	0·1 percent.

27. The major problem in industrial societies has been that of unemployment, whereas in agricultural communities it has been seasonal unemployment or under-employment. In urban areas in the Union the major concern of labour policy at this stage should perhaps be inefficient employment of labour.

28. *Capacity and willingness* of labour can be measured by factors such as (1) quantity, quality and economy of its output, (2) accidents, (3) absence and strikes, and (4) labour turnover (mobility). On the other hand, capacity (largely physiological) and willingness (largely psychological) of labour can be stimulated by pre-entry and post-entry training as well as terms and conditions of employment. These factors in the Burmese labour situation are briefly described in the following.

29. *Quality, quantity and economy of output.*—In repetition work when the same standard units are produced day in and day out quantity of output can be compared in number of units spoiled and rejected on inspection; economy by waste materials or broken tools per hundred units. Measured in these terms, the performance so far of labour in State enterprises in the Union has not been very impressive. Charges of inefficiency of labour are less frequently heard in private enterprises because of their powers to "fire' as much to hire but the occurrence of strikes may be more frequent there.

30. *Accidents.*—According to the Social Security Board, non-fatal accidents happen at a rate of 5 per 100 workers (about the same as UK) and fatal accidents occur at a rate of 2 per 10,000 workers (which compares very favourably with UK). The Factories Act of 1951, the Dock Workers Act of 1948, the Mines Act of 1949 and the Oilfields Act of 1951 all call for

safety measures against accidents. Moreover Workmen's Compensation Act defines employers' liability for compensation unless the workman is drunk, wilfully disobedient or wilfully disregards orders and caution.

31. *Absence.*—When actual rates of absence exceed unavoidable absences due to sickness or accidents, absenteeism may be said to exist. It may be due amongst other reasons to sheer laziness or preference for leisure over income (perhaps a case of a backward sloping supply curve), to unattractive work environment, to personal or family reasons (*e.g.*, married women with children) or to side occupations (clerical workers doing business or mechanics going to higher-wage private workshops). In any case, for whatever reasons, absenteeism is found to occur in certain work places in the Union.

32. *Strikes.*—Recent data on trade disputes and work stoppages are shown in the following table.

TABLE 58.—*Work Disputes and Stoppages*, 1958—60.

Year. (1)	No. of disputes (2)	Workers involved (3)	No. of work stoppages (4)	Workers involved (5)	Man-days lost (6)
1958	88	19,042	11	3,730	9,895
1959	48	15,470	3	234	1,148
1960	59	15,780	13	1,758	8,659

One generalization which can be made is that trade disputes are more frequent in urban concentrations of labour as in manufacturing industries than in semi-urban settings. Where labour is scattered as in constructional trades, there are hardly any disputes. Man-days lost due to strikes in the Union averages below one-fourth of a day per worker per working year.

33. *Labour-turnover.*—Among causes of unavoidable labour-turnover are better jobs, death, retirement (among women on marriage), incapacity or just desire for change to a new surrounding generated by *ennui* and lack of prospects for improvement. No adequate data are however available on labour-turnover in the Union.

34. *Selection and training.*—Ideally, selection of workers should be informed and impartial. But in present day Union, vocational aptitude tests and guidance is unknown except at the university level. With regard to impartiality in selection of workers, the Union is as yet happily free from closed or restrictive guilds. In order partly to overcome these difficulties, a Restriction of Engagement Act was passed in 1959 requiring all government departments, government sponsored boards, projects or corporations and private undertakings who employ more than 50 employees to recruit all their labour requirements through the Employment Exchange the number of which has been increased recently from two (one in Rangoon and one in Mandalay) to about ten. It is feared however that this requirement, if not backed by an efficient functioning of the exchanges and by vocational tests, might hinder rather than promote mobility of labour. With regard to training, a Training Within Industry programme recently introduced by the Directorate of Labour has been accepted by 33 government and private organizations and 3,350 supervisors have been trained up to date. This TWI programme aims at filling the largest gap in industrial skills at the supervisory level by training programmes in job instruction, job relations and job methods with a view to improving supervisors' skill in instructing, in

leading and in improving methods. Technical training classes for workers are also being considered. Training of workers by skilled foreign foremen and supervisors is also envisaged as in the case of the projected Thaketa bridge construction under Canadian Colombo Plan aid.

35. *Hours of employment* in the Union are limited to 44 hours a week in factories and 48 hours a week in shops and establishments. Overtime work is limited to 60 hours a year in factories and 16 hours a week in shops and establishments. Moreover Leave and Holidays Act prescribes 14 holidays (compared to 20 for government offices), 6 days casual leave, 10 days earned leave and one month medical leave. Hours of employment can be easily adapted to climatic conditions and needs of additional shifts of work but for transportation problems.

36. *Physical conditions of work* either indoors (in factories) or underground (in mines) making for fumes, heat, noise, glare, dust, humidity, stagnant air, etc., are likely to be repugnant to a farmer nation like the Burmese used to outdoor life. Factories should therefore be built not only to accommodate machinery and to suit industrial materials and processes, but also to protect the health of the workers. Motion studies which aim at minimizing human effort per unit of output by changes in apparatus, in posture and above all in the movements of the industrial worker for performing a given job should also be instituted.

37. *Wages* are the most potent single factor in the process of making the worker capable and willing to be efficient at his job (incentive) and capable and willing to move to other jobs if these were more in demand or needed (attractive). According to a Directorate of Labour survey in June 1958 the average income of regular employees (operation, service and maintenance staff) in 29 selected industries in the Union was K 112 per month. Sea and air transports as well as stevedoring fetched considerably higher wages. Female workers, where existent, earned 25 per cent to 50 per cent less than men. A CSED Survey of household expenditures in Rangoon in 1958 also reports that unskilled workers averaged an income of K 113 per month. The same Survey reveals that minimum expenditures of a household in Rangoon of 3 to 4 persons were K 138 per month. It therefore appears from these data that a worker in Rangoon cannot possibly make both ends meet unless he sends out his wife or children to work. Almost 70 per cent of the minimum expenditures is spent on food, another 13 per cent on shelter, another 5 per cent each on clothing and tobacco (their only indulgence), leaving little for anything else. In addition to this primary poverty of insufficient income, there is secondary poverty, due to ignorance of calory intake of food, etc., of income insufficiently wisely spent, to ensure physical health and efficiency. One might be tempted to attribute the existing low level of wages in this country to exploitation by employers. But it is found in practice that they are no higher in State enterprises where profits are not the only criterion. One plausible explanation for the low level of wages may be found in the low level of productivity in the face of which the Minimum Wages Act or similar legislation can be of little positive effect.

38. One way of breaking this low productivity—low wage spiral may be to depart from the conventional method of wage payment by time rate and vary the payment to the output of the worker. Advantages of piece rates are (1) greater output (2) less supervision required for quantity of output and (3) easier calculation of labour cost for each piece to the employer and (1) greater earnings (2) fair reward for personal effort and (3) more independence acquired to the workers. However, piece rates are often either impossible, or they lead to speeding up, fatigue and inferior quality of output, or they are conducive to jealousy. The loss of team spirit may however be circumvented by a system of collective piece wages and profit sharing.

39. Of the four broad functions wages are supposed to perform in the economic system, the existing system of wages in the Union has been found wanting in two of them already discussed. In other words, wages in the Union are not adequate, to conduce health ,and working capacity in the working force. Nor have they been an incentive to efficiency. With regard to the other two functions namely, counterbalancing the disadvantages of some occupations and industries and attracting workers where workers are demanded or needed by society, the Burmese wage system has not at present sufficient differential rates either industry-wise or area-wise to fufil them. The question of bonus which is often a source of friction and dispute is still under study.

40. *Social conditions of employment*—such as the status of labour in the society, the worker's attitude to work, his sense of participation and his feeling of social justice supplement physical conditions of work in constituting the non-monetary inducement to his capacity and willingness to work. In a country where the dignity of labour is not upheld, a manual worker will naturally not put in his best of what he cannot be proud of. In modern industrial routine, identification and participation is difficult to achieve. For the former, intelligent supervision, welfare work and facilities for individual consultation may help. For the latter the trade unions or joint works committees might help in later stages of development.

41. Aware of these problems, the Government has carried out an extensive programme of labour welfare and will reopen labour welfare centres with their educational and health facilities. Welfare funds are also being established for the first time in State industries. The Social Security Scheme begun since 1956 is being expanded both in the coverage of establishments and in the benefits (sickness, maternity, temporary and permanent disability) offered. In order to secure social justice in the field of labour, the Government has set up an elaborate machinery for consultation, conciliation and arbitration. While it is the intention of the Government to encourage a greater use of consultative arrangements, it will at the same time take steps where necessary to secure adequate implementation and enforcement of awards and agreements. The Government also wishes to see agreement reached by all parties concerned on an efficiency code and discipline code for workers.

42. The trade unions have an important role to play in the improvement of efficiency as well as of welfare of labour. The Trade Unions (Amendment) Act, 1959, limited registration to unions which can claim more than half the total number of workers in the factory of establishment. The serving of non-worker members on the executives of the union was also prohibited by this Act the revision of which is now under discussion. The majority of trade unions registered are what may be called the "one-shop" or "house" unions, *i.e.*, unions of workers belonging to single industrial establishments. As the multiplicity of trade unions which this system harbours is not calculated to make for organizational strength for purposes of collective bargaining, steps have been taken to encourage the formation of industrial unions or federations. As a result a number of federations such as the railway-workers, oil-field workers, inland water transport workers and bank employees federations have been set up. At the end of 1960, there were 158 trade unions on register with a total membership of over 47,000. This represents a reduction by half in the number of trade unions and by a quarter in their membership, from previous level as a result of the enforcement of the Amendment Act of 1959 as well as of a stricter requirement of returns of accounts.

43. A concrete labour programme under the Four-Year Plan is now being worked out by the Ministry of Labour. Emphasis will be placed in this programme on the problem of housing and transportation of workers. In fact, location of industries will also be considered from the standpoint of labour.

B. Rural

44. Where information on the somewhat organized urban labour is inadequate, information on the largely unorganized rural labour is even more meagre and generally dated. As a step towards filling this gap, the Central Statistical and Economics Department is conducting a survey of Rural Incomes and Expenditures in a number of typical regions in the Union, such as the Dry Zone, the Delta, etc. Preliminary results of the first phase of the survey, covering 1,534 households in 13 villages of three purposively selected townships of Kyaukse, Thazi and Myingyan in Central Burma during 1960 reveal the following information.

45. Occupational distribution of chief earners of the 1,534 households surveyed as well as their occupational status, *i.e.*, own account workers or paid workers, are shown in Table 59. As is usual in rural Burma, most (69·1 per cent) of the chief earners derive their income directly from farming land which they almost always own. A small percentage (0·5) of them are engaged in occupations subsidiary to farming like tending cattle, transplanting and weeding, mostly as paid workers. Among those (1·2 per cent) who derive their income from cottage industries like making of earthern-ware pots, boiling of palm juice for jaggery, basket weaving, etc. more than half work on their own account while the rest work for other people. Among the second largest group of occupations described as other activities, but mainly consisting of transportation (horse-drawn or bullock-drawn carts) and public works (labour for roads and irrigation works), naturally over three-fourths work on wages while a few others work on their own. If all occupations are considered, own account workers constitute over three-fourths while the remaining quarter work for other people. Assuming however that there is at least one worker beside the chief earner in each household, and that he or she works either for the chief earner or for some body outside the household, the ratio of paid workers to own account workers will considerably increase and the former will probably even exceed the latter. On the other hand, only two out of 1,534 households were reported as unemployed due to the head being ill or too old. Thus unemployment did not appear to be a problem in that part of rural Burma.

TABLE 59.—*Occupations of Chief Earners of Households by Occupation Status*

Occupation	*Percent*	*Own Account Workers*	*Paid Workers*
Total	100	75·9	24·0
Farming	69·1	67·0	2·1
Subsidiary occupations to farming ...	0·5	0·1	0·4
Cottage industries	1·2	0·7	0·5
Other activities	29·1	8·1	21·0
Unemployed or dependent ...	0·1	...	...

46. Distribution between own account workers and paid workers is however not so significant in rural areas as it is in urban areas, since both the average farmer and his help do the same manual work and live in pretty the same conditions. According to the survey, 97·6 per cent of the households in these villages of Central Burma, the driest part of the country, live in self-owned bamboo (including palm stems) and thatch (including palm leaves)

structures, while the remaining 2·4 per cent live half in wood and half in brick buildings, also self-owned. The average acreage per farm household is 4·9 and each farm owns or hires two pairs of farm animals and a set each of plough and plough share.

47. The average agricultural expenditure is K 202 for the year, consisting of K 72 worth of capital expenditure such as purchase of livestock and agricultural equipment and implements and K 130 current expenditures the composition of which is shown in the following table:

TABLE 60.—*Agricultural Expenditures*

Current Expenditures	*Percent*
Total	100·0
Ploughing	8·0
Planting	13·2
Transplanting	5·7
Harvesting	17·2
Purchase of seedlings	7·1
Hiring of cattle	2·0
Cattle feeding and herding expenses ...	27·3
Repair of bunds and irrigation channels ...	1·7
Transport expenses to sales points ...	1·3
Land rent	9·5
Land revenue	5·3
Other expenses	1·7

48. The average yearly domestic expenditure is reported at K 852 and consists of the following items:—

TABLE 61.—*Average Expenditure of the Households Per Annum*

	Kyats	*Percent*
Total	852	100·0
Food and beverages	409	48·0
Tobacco	51	6·0
Fuel	3	0·4
Clothing	169	19·8
Domestic utensils	38	4·5
House repair	8	0·9
Travelling expenses	12	1·4
Charities and ceremonials ...	112	13·1
Recreation	26	3·1
Medical care	19	2·2
Educational expenses	5	0·6

49. The average income reported is somewhat less than these expenditures. Part of the difference may be due to under-reporting of income (particularly of side incomes) and over-stating of expenditures, practices not uncommon in response to these surveys. Part of the difference may however be genuine, leading to increased indebtedness. In this

connection, the survey reports that these 1,534 households repaid an average of K 67 in principal and K 8 in interest on their debt after the harvest of 1960. Total interest paid and the rates of interest charged are as follows :—

TABLE 62.—*Interest Paid Out and Rates of Interest Charged*

Rate of Interest per annum	*Percent of Total interest paid*
6·25	44·2
12·00	16·2
36·00	0·5
72·00	38·5
Above 100	0·6

50. The lowest rate of interest of 6·25 per cent is carried by the so-called GA loans issued by the Government. The second lowest rate reported at 12 per cent probably corresponds to that charged by the State Agricultural Bank *plus* its village bank. The 36 per cent rate accrues to loans made by money-lenders at 3 percent per mensem on surety of gold or jewellery while the 72 per cent rate is charged on loans from money-lenders given without surety to persons they consider trustworthy. Interest rates of 10 per cent per mensem or higher are not uncommon in this country.

51. If the above is true of the Dry Zone where its agricultural products such as groundnut, sesamum, chillies, onions, etc., fetch fairly handsome prices, more than eight times that of pre-war, one can easily imagine the status of income and living conditions in paddy growing areas where the income is pegged to only three times of per-war. While the recent increase in the price of paddy is a step in the direction of improving the lot of the agricultural workers, much more need to be done for this largest group of workers contributing most towards the national income.

52. Many programmes contained in the Plan are directed towards this need. The extensive programmes of land restoration and improvement, fertilizer distribution, construction of irrigation works, expansion of the agricultural education and extension services, double cropping and diversification are designed to increase the prosperity of the rural economy. In addition there are the public works programmes of construction of roads, waterways, embankments and rural structures. Works undertaken by the Pyidawtha Committee will also provide additional opportunities for rural employment. The formation of agricultural co-operatives will be a great step towards improving the conditions of the agricultural worker.

5. TRADE

A. Foreign Trade Policy

53. Foreign trade plays a strategic role in Burmese economic life. Exports in particular exert a very strong influence on the national income, the rate of savings and investments, as well as monetary and fiscal stability. Imports on the other hand make up a large proportion

of the consumer commodities including most of the incentive goods. Machinery, raw materials for manufactures and other capital goods are also imported. Hence changes in the volume, value, composition and direction of trade and other factors affecting the terms of trade as well as its stability play a critical role in economic development and developmental planning in the Union of Burma.

Exports

54. Rice is the main source of export earnings and accounts for 75 to 80 percent of the total; other agricultural products make up about 14 percent. Timber and minerals are next in importance with the former providing 5 percent and the latter 4 percent of total export earnings. Since diversification of the economy has been listed as a major objective of the Plan, with a view to correcting the existing extreme dependence on one crop, it follows that the main task of trade policy under the Plan will be to diversify the export structure. While as a means to generate a larger surplus for diversification projects, efforts to push the export of increasing quantities of rice in a more diversified market should continue, promotion of exports other than rice claims an even higher priority. The production of other agricultural products as well as forest products and minerals will be increased and markets for them secured. In addition to these traditional exports, there will also have to be increasing reliance on new exports.

Rice

55. The post-war period has seen a rather sharp fluctuation in the price of rice. In the immediate post-war years, there was a brisk demand for this essential foodstuff in the traditionally rice importing areas coupled with a deficiency in the supplying power of the major rice exporting countries. As a result the unit value of rice rose by 87 percent over the period 1945 to 1953. This sharp rise in the price of rice naturally induced a substitution by wheat which was either cheaper in price or given away by the US aid programme in certain traditionally rice-consuming areas. Aided by the recovery in rice production in major importing as well as exporting countries and the disposal of US rice surplus under aid programmes and last but not least the stubborn bargaining by India in the belief (later proved illusory) that she has achieved self-sufficiency, reacted with an equally rigid pricing policy on the part of the Union, the export price of Burmese rice registered a decline of 50 percent over the period 1953 to 1960. The Union's reaction has been to resort increasingly to bilateral agreements including those with socialist countries most of which agreements have now expired. The annual level of Burmese rice exports during this period has remained below 2 million tons except in 1957 and 1960, no doubt due partly to increased domestic consumption by a larger population.

56. The future of world rice market is difficult to predict. Some traditional customers of Burmese rice like Japan have achieved self-sufficiency. Some others like India (under her Third Five-Year Plan) and Pakistan (under her Second Five-Year Plan) are struggling for self-sufficiency against their exploding populations. Direct price competition from wheat has somewhat diminished with the approach of wheat-rice price parity. A realistic long-term rice policy should take into consideration these points of importance. It is assumed however that for the next four or five years the Union should be able to dispose of her exportable surplus ranging from 2 million tons in 1961-62 to 2·8 million tons in 1965-66.

45. Specific measures in rice marketing include amongst others (1) encouragement of private exports by tender and offer systems particularly of better qualities by means of commission, rebate and import licences, (2) encouragment of private purchasing of paddy,

(3) shifting paddy loans to national banks, (4) improvement of milling facilities by loaning new rice mills as well as cash and (5) encouragement of marketing and milling by cultivator organization, (6) rationalization of SAMB operation to lower costs.

Other Agricultural Products

58. Good prospects exist for the export of rubber, cotton, jute, pulses, maize, potatoes, tea and oil-cakes. Increased production of sesamum, groundnut, sugar, wheat, coffee, herbs and medicines, milk and milk products, and Virginia tobacco will be promoted as import substitutes.

59. In order to bring about the increased output of the two classes of crops mentioned above, the following measures will be undertaken, *viz.*, (1) price guarantees, (2) subsidies, (3) expanding qualitatively and quantitatively the work of the State Agricultural Bank, (4) grants of fertilizers, (5) irrigation works, (6) weeding, (7) demonstration plots, (8) grading committees, (9) search for new markets, (10) agricultural engineering projects to promote industrialization of agriculture.

Forest Products

60. The volume of timber exports for the period 1951-52 to 1958-59 was on the average about 24 per cent of 1937—41 period. Since it is targetted under the Plan to raise teak production from the present level of 250,000 tons to the pre-war level of 450,000 tons, export promotion efforts will have to be considerably intensified. Export of hardwoods is now only 25 per cent of pre-war in spite of a level of production of 132 per cent of pre-war. Production costs and freight charges will have to be reduced to promote their export. In setting up new plywood mills either publicly owned, privately owned or joint ventures, public and private joint ventures with foreign firms will be encouraged and private foreign investment will be welcomed. It is also intended to encourage export of furniture.

Minerals

61. Even at its post-war peak in 1954-55 the volume of export of minerals and ores was only 41 per cent of pre-war 1937—41 average. In order to avoid import of petroleum or minimize the import of crude oil, it is intended to encourage exploration in competition with BOC. It is also planned to increase exports of tin, tungsten and other mixed concentrates.

Industries

62. Exports of (1) aluminium products, (2) rubber and slippers, (3) furniture, (4) cottage industry products, (5) vests and towels, (6) canned and dehydrated agricultural products, (7) corn flakes as well as the production for domestic use of bicycle tyres and tubes will be promoted.

63. Measures necessary for the promotion of industrial exports and products are (1) a Standardization Committee, (2) exchange rebates for exporters, (3) tax incentives, (4) issue of raw materials in time, and setting up of Industrial Development Bank. Tourist trade as a foreign exchange earner will also be encouraged.

64. A Trade Promotion Council has been formed in the Ministry of Trade Development and a Trade Promotion Commissioner appointes, Staff services are however required to enable the Council to publish news, sheets, open show-rooms, hold trade fairs and service trade attaches abroad whose number also need to be increased.

General Policy Measures

65. Recently the Union adopted a policy of increasing the volume of imports from countries which take her exports, particularly rice, in large quantities as an inducement to maintaining or expanding her exports. Another export promotional measure has been to introduce a link system between exports and imports, whereby exporters of certain commodities or qualities of commodities are given import licences to the value of a certain percentage of export value. This is another sound policy which can be extremely fruitful provided safeguards against abuses are taken. Reorientation of tariff policy from the present purely revenue raising character towards protection of domestic industries is another important policy issue. Finally, international regional co-operation should exercise an increasingly greater influence in the formulation of national trade policies.

Imports

66. The Union's imports consist mostly of manufactured goods such as textiles, machinery, building materials, transport equipment, etc. This composition of imports is similar to the pre-war picture. The most significant change however has been the rise in the importance of investment goods. In the period 1956-57 to the end of the first half of 1959-60, machinery and transport equipment accounted for 21 per cent of total imports or double the percentage during the period 1937—41. Imports of cotton goods have averaged close to 20 per cent of total imports in recent years, or the same as in the pre-war period. Vegetable oil production has increased in the post-war period and imports have relative to pre-war declined. The import of most of the other groups of imports has not shown great change.

67. Shortage of foreign exchange available for consumer imports, due partly to failure of exports to expand and partly to larger allowances made for investment goods, on the one hand, and sizable deficit financing in the past without commensurate increase in production on the other hand, have in the context of high propensities to consume and import inherent in the economic structure given rise to import problems. Import and exhange controls were therefore imposed to conserve exchange. The inevitable consequence followed. Prices became high, importing became a lucrative field attracting all and sundry and the administration became the butt of many accusations. In view of this, measures to contain margins of profits within reasonable limits, to extend distribution facilities of major importing agencies to township level and to secure reporting of stock lists to Civil Supplies Commissioners will be implemented.

Import Programme

68. Since it is proposed under the Second Four-Year Plan to stabilize the level of consumer imports while rapidly increasing the level of capital imports (to be doubled in fact for the private sector), it will not be possible to bring down or even maintain the price level of all commodities of consumer imports. A clean break with the past practice of wanting to import luxury or semi-luxury goods while wishing for a low price level of essential goods is therefore called for. The import programme must be drastically reviewed to weed out luxury or semi-luxury items in order to make room for larger import of essential commodities. An outcome of this policy will probably be a two-tier price system prevailing in countries like Yugoslavia where essentials are cheap and inessentials extremely expensive. If it is desired to lift the restraint on consumption in the immediate future, an intensive drive for domestic production of import substitutes, with an emphasis on essentials first, must be carried out.

Industrial Imports for the Private Sector

69. The fundamental problem here again is the overall shortage. This shortage results in import controls and black markets. A complicating factor here is that some raw materials can be used directly for consumption. Another problem is excess capacity in some industries due to the shortage of raw materials. This means either that the expansion of capacity has taken place without reference to future supply possibilities or that the supply level that was fixed for these industries has been cut because other industries had to be satisfied. In either case there is a wastage of foreign exchange spent on the import of these machines.

70. This partial review of the problems of imports of industrial goods indicates that shortages and excess capacity co-exist to some extent in private industry. This anomalous situation may not be all pervading but is indicative enough of the need for a proper review and study. A basic need is a system of industrial criteria.

Specific Recommendations

71. The foreign exchange shortage and price stability are the two conflicting issues. However, it is essential to increase foreign exchange earnings to the maximum extent possible and at the same time, to ensure that a suitable price policy is formulated and carried out. Timely issuance of import licence is necessary to stabilize prices. Some essential commodities will be kept under Open General Licence. Firms which fail to observe trade regulation will be deregistered.

72. In respect of distribution of goods, it is intended that the Wholesale Co-operative including its branches and other co-operatives, Civil Supplies Department and its private retail shops, Joint Venture Corporation retail shops and their agents and finally private national business will be the four main channels of distribution. The expansion of retailers belonging to the Civil Supplies, Co-operatives and Joint Venture Corporations as well as the streamlining of the procedures of these organizations is needed. In respect of the encouragement of private national business, credit appears to be the critical issue. Importers should have place of business, skill or experience in trade, working capital and godown to store goods. Compulsory registration of retailers should also be enforced.

73. Civil Supplies will, subject to a comprehensive review, continue with the existing lines of imports. At the same time, however, direct grant of import licences of cotton yarn to larger industrialists is being considered. If revenue demands are not going to be made on the Board, prices may be reduced further but not to the extent that blackmarketing of commodities will be encouraged. The following table shows the number of retail shops to be opened during the four years:—

TABLE 63.—*Programme for Retail Distribution*

Year	Rangoon			Mandalay			Other Townships			Total
	CS (2)	JVC (3)	WSC (4)	CS (5)	JVC (6)	WSC (7)	CS (8)	JVC (9)	WSC (10)	
(1)										(11)
1961-62 ...	25	25	25	13	13	13	60	68	43	285
1962-63 ...	25	25	25	13	13	13	60	68	42	284
1963-64 ...	25	25	25	12	12	12	60	67	41	279
1964-65 ...	25	25	25	12	12	12	60	67	41	279
Total ...	100	100	100	50	50	50	240	270	167	1,127

A steady flow of goods will go through these shops. Co-operatives should still be used as retail outlets. Competition by the private sector in the distribution of essential commodities a means to improve the efficiency of these agencies may also be explored.

74. The Civil Supplies, Joint Venture Corporations and Wholesale Co-operative will be given full power to operate as commercial concerns. The import policy will be adjusted to seasonal changes in demand. Balance of physical stocks and value of stocks should be known from month to month and a system should be devised to attain this objective. The JVC's should handle only textiles, food and hardware and building materials. The Commercial Section of Rangoon Electricity Supply will continue to try to develop national retailers.

B. Internal Trade Policy

75. The problem of import trade has received a disproportionately large attention of the authorities at the neglect of the more important problems of internal production, its distribution and prices. In fact the failure of 1957 crash import programme to bring down the cost of living can be explained by the neglect of domestically produced commodities in the family consumption budget while the primary emphasis it received accounts for the relative success of 1959 price lowering campaign.

76. A recent study reveals that in this sector of production for domestic consumption, productivity is low, production methods out-dated, seasonal unemployment rampant and specialization narrow. A very large portion or almost all of the credit is supplied by the money-lender, the village shop-keeper or trader in small operations and by the wholesalers in Rangoon or other big cities in the case of larger scale operations as in fish and fish products, mutton, pork, fire-wood, charcoal, etc. Since higher rates of return on a smaller volume of trade is preferred to larger turn-overs, the supply to urban areas with higher incomes tends to the highest level of prices the traffic can bear. As it is, urban prices of these commodities fail to provide a stimulus to ultimate producers on account of the buffer provided by the middlemen financiers.

77. One way of breaking this vicious circle of high commodity prices and enlarging the supply of these goods would be to make available to the producers adequate credit facilities through such credit institutions as Small Business Banks, hire purchase facilities, technical advice, marketing and standardization services, storage facilities, transportation facilities, etc. Among the facilities mentioned, credit facilities would appear to be the most urgent and vital.

6. PUBLIC SERVICES

78. Government is well aware of the important role the public services must play in any scheme of development. The public services should possess the required knowledge and training to manage and operate well the institutional frame-work of development. They should be disciplined, impartial and non-political. They should also be straightforward and honest in the discharge of their responsibilities. There should be a sense of urgency and mission in the ranks of the public services. In May 1960, a Public Services Enquiry Commission was appointed to suggest an administrative set-up which will consist of officials capable of acting according to law and in the interest of the masses, and who are straightforward, impartial, qualified and honest. The main function of the Commission was to draft appropriate legislation to bring about—

(*a*) an Independent Civil Service, the members of which can be relied on to serve the country faithfully regardless of which political party happens to be in power, and who will be able to resist all attempts to convert them into party adherents;

(*b*) an Efficient Civil Service whose members will be recruited only from among candidates with publicly prescribed qualifications through publicised regular channels, whose transfers and postings will be regulated solely by their qualifications and the requirements of the Service, whose work will be subject to central supervision, and whose promotions at least in certain grades will be based solely on merit; and

(*c*) an Honest Civil Service, the members of which will, because of the security afforded them by the terms and conditions of their employment, including retirement benefits, eschew all forms of corruption, and who will also be protected against mistakes made by them in good faith.

79. The Commission submitted its Report to Government in May 1961. The Report was published and widely discussed. A four-day public seminar was held in July 1961, where the recommendations of the Commission were thoroughly studied.

80. Since security of tenure together with its corollary, special disciplinary process, was undoubtedly one of the basic rights of the public servant and since in most countries consulted by the Commission conditions relative to security had the sanction of law the Commission recommended that safeguards against arbitrary dismissal should be incorporated in the Constitution. It was also recommended that a separate Civil Services Act be enacted incorporating some basic requirements pertaining to other conditions of service.

81. The Commission recommended that all appointments to the civil service should be through open competitive recruitment to be conducted by the Public Services Commission. The Public Services Commission should also be the Appeal Board to hear and determine appeals concerning promotion to and discipline of Junior and Senior Branches and Selection Grade of the civil service. The Public Services Commission should advise Government on matters which it considers to be necessary for the efficiency of the public services.

82. The Commission recommended that there should be proper single co-ordinated control of the civil services. The Chief Secretary should be assigned definite duties of supervision and control as adviser to the Prime Minister on all service matters.

83. In the matter of conditions of service the Commission recommended on such matters as promotion and merit rating, discipline and appeal, remuneration, leave, working hours and holidays, retirement, pensionary benefits, and welfare benefits.

84. For economy and efficiency in the public service the Commission recommended that there should be greater delegation of authority and more decentralization of functions in every level. There should be division of work between the different levels of authority. O & M and staff inspection teams should be constituted. The training and education of civil servants should be conducted on a systematically orgainzed system. Departmental training courses should be conducted in all major Government organizations and the assistance at present given by the central instructional courses should be obtained by these organizations. Commission recommendations on matters concerning amalgamation of Ministries and integration of Departments are referred to in Chapter V above.

CHAPTER VII

INSTITUTIONAL ARRANGEMENTS FOR DEVELOPMENT

STATISTICAL DEVELOPMENT

Introduction

1. Formulation of economic policy should be based on a firm foundation of adequate and reliable statistics. Effective economic planning based on quantitative targets is even more dependent on efficient statistical services. However in the course of preparing the Second Four-Year Plan or in forecasting future requirements and availabilities for the Union Government or for the private sector the basic data which should have provided the point of departure for recommendations and decisions made have been inadequate. The judgment of experts or informed persons had to suffice in many cases. This is a dangerous procedure. A rapid increase in the breadth and depth of coverage should be the goal.

A. Census

2. A country-wide census normally provides the basic bench-mark data in the building up of a statistical system for economic planning. In Burma, the last complete census data are those of 1931, now exactly three decades out of date. A country-wide census now scheduled for 1963 is a minimum requirement for developmental planning.

The present staff of the Census Office have acquired invaluable experience from their 1953-54 operation and are well-equipped to handle the next census. However, the census is such a big job to be completed in a short time that as on previous occasions, the Census Office will need the active assistance of some other Departments. In order to realize economy of personnel and expenses and also since the Registration Office itself will derive great benefit from a good census operation, the Registration Office should time their operations in such a way that their staff can be spared for co-operation with Census staff at the most important stages.

One of the reasons why the 1953-54 Censuses were not able to cover the entire country was the state of law and order. As a result, information covering only a very limited geographical area was obtained from those Censuses, in spite of the use of some of the best techniques of census-taking in the world. It is therefore highly desirable that an effort be made to obtain a complete coverage as far as possible this time, and for this purpose, in disturbed areas, the active support of the Armed Forces will be arranged for the Census staff.

B. National Sample Surveys

3. In India, there has been established a system of National Sample Surveys which are being taken periodically to provide basic information needed from time to time for policy purposes. The technique of those surveys has now been near-perfected and can be introduced in the Union. It would be most convenient to start such a system of national sample surveys, after a good Census has been carried out and its results are available. Therefore, it is recommended that in the next (Third) Four-Year Plan, a system of National Sample Surveys, be projected, and for this purpose, training programmes for sampling techniques be initiated in the present Four-Year Plan. In the meantime *ad hoc* surveys on a regional basis conducted by the CSED should continue.

C. Development of Departmental Statistics

4. Some government departments such as the Census, the CSLR and the CSED exist for the production of statistics but most government departments produce statistics as an administrative by-product. Not many of the latter however realize the importance of statistics as an instrument of management control and policy formulation. At present the CSED has posted its professional statistical staff in Labour, Customs, Health and Industries Departments. Some other departments such as the Union Bank, the Ministry of Finance and Revenue, State Commercial Bank, the Railways Board, the Port of Rangoon, SAMB, STB, Civil Supplies Board, Social Security Board, IWTB, UBA, Agriculture Department, Forest Department have their own professional or semi-professional statistical staff, although many of them need considerable strengthening. Statistical Sections should be set up in many other departments.

A brief discussion of some of the departmental statistics follows:

(1) *Agricultural Statistics.*—Data on agricultural acreage, output and yields are published by the CSLR. The ARDC has its own estimates of crops based on their expansion and improvement efforts. So has the Agriculture Department. The SAMB has its own procurement data on rice. Discrepancies between these various estimates are often the subject of much dispute. The Ministry of Agriculture has now set up a committee to verify these estimates. While the need for revising the CSLR's method of estimation by means of normal (average) yield is obvious, other basic information such as size of holding, utilization, organization, cultivation costs, farm consumption and sales and livestock should be collected. Household Expenditures Surveys conducted by the CSED in selected villages in the Dry Zone and the Delta will be continued in other typical economic regions as well as in a few large towns.

(2) *Industrial Statistics.*—Annual Surveys of Manufactures covering 3,000 to 4,000 establishments with 10 or more employees have been conducted since 1955-56 jointly by the CSED and the Directorate of Industries. Improvement of these data both in coverage and quality will be continued in order to provide reliable data for the formulation of tariff, import, loans and investment policies. Construction of an industrial production index is also being planned.

(3) *Vital and Health Statistics.*—The Directorate of Health and the CSED have jointly worked out a scheme to reorganize the entire system of reporting to enhance coverage of vital and health statistics which at present is confined to selected urban areas. The expansion scheme is to be implemented in four stages.

(4) *Price Statistics.*—Wholesale prices are collected at Rangoon for 300 commodities for local and imported commodities while those for 50 items of agricultural produce are collected from 33 towns and for 32 items of forest produce are collected from 25 towns. Retail price collection covers quotations for 200 items of both local produce and imported commodities from representative markets and shops in Rangoon. To supplement the Consumer Price Index, a Wholesale Price Index is being prepared. Since a great deal of economic policy aiming to influence both consumption and production, including monetary policy in particular depends on accurate price data, efforts will be made to improve price statistics.

(5) *Construction Statistics.*—The largest gap in Union Statistics will be found in the field of construction owing to lack of co-operation by local governmental bodies and private construction companies alike. As such estimates of construction, which incidentally constitutes a large proportion of capital formation, are presently based on data on imports and domestic production of construction materials.

(6) *Manpower Statistics.*—Labour statistics is at present confined to data on employment exchanges, trade unions and trade disputes, wages and prices and accidents. Data on absenteeism and labour turnover are still lacking. More important however is the lack of data on manpower requirements and availabilities on a national basis. A manpower survey is now being planned.

(7) *Other Statistics.*—Monetary and banking statistics, financial statistics, foreign trade statistics, transportation statistics (except IWTB and Highways), forest statistics are now fairly well-established. Collection of mining and power statistics however need to be expedited. Improvement of these primary statistics will no doubt contribute to the improvement of social accounts.

D. Regional Statistical Service

5. It is one of the important considerations of planning nowadays that economic conditions in all parts of the country should be taken into account in detailed planning and implementing of economic projects. For this purpose, presently available data on regional conditions do not seem quite adequate, particularly regarding income and price conditions. A step towards strengthening this area is to have a regional network of statistical data collecting and compiling services.

E. Mechanical Tabulation

6. Mechanical tabulation of accounts and statistics is essential to the maintenance of up-to-date data for purposes of intelligence, work control and administration. In the post-war period the Central Machine Tabulation Unit in the CSED has serviced several governmental agencies (numbering seventeen at one time) apart from processing its own departmental data. Many of these agencies such as the SAMB, Port of Rangoon, IWTB, Union Bank, RESB, Purchase Board, Burma Army, National Housing Board, etc., have now installed their own machine tabulation units. The adoption of mechanical tabulation in the Accountant-General's office will lead to its work being expedited eliminating most of the complaints about delays.

F. Committee for the Development of Basic Statistics

7. Recently Government has formed a Committee for the Development of Basic Statistics charged with the following functions :

(*a*) To review the present machinery for the collection of statistics in the central governmental departments, States, and districts, and to recommend measures for their improvement.

(*b*) To recommend measures for the co-ordinated operations of the above machinery.

(*c*) To review the present legal powers for the collection of statistics and to recommend additional powers if necessary.

(*d*) To recommend measures for the success of the 1963 Census.

THE ADMINISTRATION OF DEVELOPMENT

8. The success or failure of the Plan depends to a significant degree upon the establishment of an effective system of administration capable of implementing the policies and programmes which the Plan entails. It is the administration which implements the Plan, generates popular energy and rouses and attracts community effort and participation. Any incompetency or lack of efficiency on the part of the administration jeopardises the success of the Plan. As a result it is necessary to take the urgently required steps to improve the system and functioning of the administration of development.

Functions of a Planning Organization

9. The following are the tasks of a planning organization in the formulation of development plan :

(*a*) Collect all necessary data to help identify problems and to establish capabilities.
(*b*) Choose among alternative objectives.
(*c*) Translate the objectives into targets.
(*d*) Decide on priorities.
(*e*) Co-ordinate the various parts of the Plan.
(*f*) Mobilise necessary resources—financial, material and human.
(*g*) Allocate funds into specific budgets.
(*h*) Determine allocation of foreign exchange in accordance with import priorities.

10. The planning organization must not only formulate the plan and make the necessary allocations but it must also watch over its implementation. It must endeavour to discern and appraise favourable and unfavourable developments, reformulate the plan in the light of new developments and the actual implementation or lack of implementation of the plan. This means that priorities may have to be redefined, resources allocated again, policies have to be changed and programmes in some fields may have to be stopped in accordance with new objectives and new priorities. Thus the planning organization is concerned not only with economic intelligence but is involved in the making of political and economic decisions of the highest order. The central planning organization is the agency of political executive, meaning the Council of Ministers, and has to maintain close contact with central, State, and local administrative machineries.

11. In the light of the above functions the weakness of the present planning organization lie in the discharge of the following technical functions :

(*a*) The conduct of research connected with long-term perspective planning.
(*b*) The study of cost-benefits.
(*c*) The co-ordination of inter-industry programmes.
(*d*) Attention to physical planning as distinct from financial planning.
(*e*) The formulation and co-ordination of regional plans.
(*f*) Planning of non-capital development in public sector.
(*g*) Determination of projections, policies and actions in private sector.
(*h*) Watch and report of progress of implementation.
(*i*) Expedition of projects to bring them to a speedy and economic completion.

Any system of planning organization must take into account the elimination of the above deficiencies.

The Set-Up

12. The chief organ of the central Ministry of National Planning is the National Planning Commission whose members include the Minister of Finance, Revenue and National Planning as chairman, the Heads of the States, the three Ministers for Industry, Agriculture and Forests, and Trade, the two Parliamentary Secretaries for National Planning and Defence, the Financial Commissioners, Chairman of the Union Bank, Secretary to Council of Ministers and Executive Secretary to National Planning Commission.

The Commission is assisted by a Committee of Officials comprising the Secretaries of National Planning, Finance and Revenue, Industry, Agriculture and Forests, Trade Development, a representative of the Ministry of Defence, General Manager of Union Bank, Director of Commercial Audit, and the Professors of Economics and Statistics of University of Rangoon.

13. At the present there has been established also a National Planning Advisory Committee on which are represented the four political parties, Union Party, AFPFL, NUF and ANUO. It is engaged in seeking the best means to formulate and implement short-term and long-term plans of development, formulating the plans and devising the means to mobilise human, material, financial and intellectual resources. It is operating through a Policy Committee and a Programmes Committee.

14. The National Planning Commission and Planning Advisory Committee are being served by the staff of the Ministry of National Planning which is broadly disposed in the four divisions of Central Statistical and Economics Department, the Progress Reporting Section, the Operations Improvement Division and the Foreign Assistance Administration Section. Central Statistical and Economics Department is the central organization for economic intelligence, analysis and interpretation. The Progress Reporting Section reports on the progress of developmental projects under implementation. The Division for Operations Improvement looks into the operation of the public enterprises of the State to advise on methods and means of improvement of the daily operation of these enterprises. It also analyses and studies the commercial budgets of these enterprises. The Foreign Assistance Administration Section is concerned with the administration of the programmes of technical assistance of foreign governments and organizations and with the administration of foreign capital loans and grants.

15. In addition to the central planning organization there are or should be planning units in the Administrative Ministries. These are the agencies which should formulate the basic sectoral plans. The quality of the comprehensive plan depends upon the quality of the basic sectoral plans. If the Administrative Ministries and executing agencies are deficient in formulation of plans for their respective fields the plan drawn up by the central planning agency may be unrealistic. It is essential for each Administrative Ministry to have a planning unit of its own. At present some of these Ministries have planning sections in name but are not staffed by technicians qualified to discharge the functions of these sections. Therefore it is essential that trained economists and statisticians are inducted into these sections. A government-wide Statistical and Economic Service on the pattern of the Accounts and Audit Service with interchangeability of posts should be the goal of immediate reorganization of the planning machinery.

16. As suggested in the meeting of the Planning Advisory Committee of April 25, 1961 State Governments should also set up planning units of their own. It is understood that the Shan Government have set up a Planning Ministry. The central planning agency should be in close touch with these State planning units and should be able to provide technical assistance where it is requested.

17. New planning units for the regions are being established in the form of new Pyidawtha Committees. At the present time though these committees may be able to determine the immediate needs of the localities but they may not have the facilities and technical capabilities to formulate full-fledged local plans which take into account not only requirements but also resources and capacities. The central planning agency in conjunction with the Ministry responsible for the administration of these committees will have to draft and

promulgate clear and precise directives on functions, methods and procedures of plan formulation and progress reporting.

Execution

18. Although there are weaknesses in the planning organization due to understaffing and incomplete orientation the real trouble area in the administration of development lies in execution. Unless a revolutionary change can be effected in the system and methods of execution the success of the Plan will be jeopardised from the start. What is required is a courageous facing of the problems involved, a realistic assessment of alternative lines of action and a resolute enforcement of decisions.

19. One reason for the feebleness of executive efforts is due to lack of clarity of objectives. This reason may seem to be peculiar in the light of the fact that objectives have been determined, targets set and programmes drawn up for the executing agencies. Yet it is true that these agencies remain vague about objectives. This is due to their uncertainty about the degree of decisiveness of policy decisions, the determination of Government to implement these decisions and about policy continuity. If executing agencies are to be clear about their objectives it must be made very plain that Government is resolutely determined to implement their decisions and to maintain continuity of purpose.

20. The weakness of physical approach to projects is another reason for low performance of execution. It has been pointed out in paragraph 11 that there is insufficient attention paid to physical planning as distinct from financial planning. It is clearly understood that financial planning is important but physical planning deserves no less attention, and in many cases, it may be argued that physical planning is the more important of the two. But executing agencies have their operations so exceedingly oriented towards financial planning that the physical aspects of project implementation are relegated to a minor position. The ways to overcome this are to insist on complete project proposals, cost-benefit studies, thorough assimilation of knowledge of physical inputs required accompanied by a schedule of sources of these inputs, and the formulation of realistic work-programmes.

21. The matter of cumbersome procedures is so well known that it needs no elaborate explanation. Here again, a courageous and realistic approach to procedures in the light of clear objectives and purposes could both eliminate unnecessary procedures and also render more effective those procedures which are decided to be maintained. Every agency should be required to review within the next six months its procedures and regulations, their rationale, effectiveness and whether the physical and financial costs exceed the benefits derived from the adoption of these procedures.

22. The present system of exercise of financial control is another cause of feebleness of execution. Projects and requests for finance should be subject to the closest scrutiny at the time of making annual budgets not only to their intrinsic merit but also to the availability of resources. Once the project has been approved Ministry of Finance and Revenue should provide the funds for it and the Administrative Ministry supervise its expenditure. This means that greater attention should be paid to cash flow estimates of Government and to Ways and Means operations.

23. A major weakness is in decision-making. Improvements are necessary both in the structure of decision-making as well as in quality. Responsibility and powers of each officer at each level should be clearly defined in a frame-work of devolving powers. Decision-making within the competence of each level should not only be encouraged but should be

required. Papers reaching a Ministry or executing agency should arrive at a level as close as possible to the officers competent to make decisions on them. This will mean a relative increase of medium-skilled personnel and a reduction of the excessive number of low-skilled personnel performing purely clerical functions.

24. The above paragraph related to decisions which may be taken well within the competence of a department. Occasionally there may be issues on which the department is reluctant to make a decision by itself because of the far-reaching consequences involved. At the same time it may not consider that the maturity of the case is such as to warrant seeking decision of the Council of Ministers. In this case there is extant machinery which may be used. The National Planning Commission is the organ which would most appropriately serve the needs of that particular department. Greater use should be made of the National Planning Commission and its Committee of Officials to resolve such issues.

25. Another factor involved in execution is co-ordination of the programmes and activities of the various departments. At the moment the achievement of co-ordination is attempted through committees on which the related departments are represented. Though the committee is an appropriate form of co-ordinating activity the present method of usage does not achieve the purpose. There are many co-ordinating committees which do not achieve co-ordination. This is due to a number of reasons. There may be inadequate preparation before meeting, representatives may be unable to speak with authority or to assume responsibility, and most important, agreement reached at committees may not be implemented. The non-enforcement of decisions reached in committee is a thorny problem in the utilisation of this form of achieving co-ordination. A way to resolve the latter problem is to make the National Planning Commission fully operative.

26. A new set of committees recently formed are the Pyidawtha Committees. These committees will have to be integrated into the frame-work of planning, execution and inspection if the Plan is to be successfully administered.

Inspection and Expedition

27. For the speedy and economic completion of projects it may be necessary to set up machinery for inspection and expedition charged with the following functions :

(*a*) To keep a continuous watch on progress of Plan projects.
(*b*) To render assistance wherever projects are confronted with difficulties.
(*c*) To take corrective action to eliminate wastage.
(*d*) To recommend and or take disciplinary action in cases of operational or administrative inefficiency, neglect, or corruption.
(*e*) To recommend measures for the speedy and economic implementation of projects.

28. For the discharge of the above functions Government have recently formed a Commission for the Supervision of Development Projects. The Commission is composed of the Prime Minister as Chairman, the Minister for National Planning as Deputy Chairman and the Auditor-General, the two Financial Commissioners, the Chief Secretary, the Secretary, Ministry of Finance and Revenue and the Director of Commercial Audit as members. The Secretary, Ministry of National Planning, will serve as Executive Secretray to the Commission.

PUBLIC PARTICIPATION

29. It would be unwise for the Government to attempt to implement the Plan on its resources alone. In truth, the very fact that it has formulated a Plan for economic and social

development implies that it will release popular enthusiasm and seek to win public participation in its programmes. The first requisite for popular support is public understanding. Immediately on Parliamentary adoption of the Plan a public relations campaign must be waged to inform the people in very simple terms the content and implication of the Plan. They must be told what is going to be done for them and what is expected in return from them. It might be necessary to coin slogans and catchwords to embody the principles of the Plan and of public co-operation. To this end the services of the following organizations must be used :

(*a*) political parties,
(*b*) Pyidawtha Committees,
(*c*) voluntary organizations,
(*d*) public relations departments of government,
(*e*) public relations agencies of States, and
(*f*) mass media systems.

PYIDAWTHA

30. To fuse the self-help efforts of the people with activities of Government in the planning and execution of programmes of economic and social development there are being constituted Pyidawtha Committees in the Union. These Committees are being formed at the divisional, district and township levels the membership being composed of departmental officers at the respective level, Members of Parliament, representatives of political parties having representatives in Parliament, and other suitable representative of the people.

31. Public participation will take place in two fields of activity. There are those activities performed by the responsible departments and agencies of the Government. Such activities are of the types performed by the Departments of Agriculture, Irrigation, Highways and Education. The people can contribute their advice and effort by associating with departmental officers in the allocation of priorities at the local level within the national programme.

32. The greater role reserved for the people lies in the self-determination of their economic and social development through the activities of the Pyidawtha Committees. In these activities they will be given an opportunity not only for practical training in local government but also will be committed to the implementation of local development programmes. They will participate in the development of their communities through programmes of mass education, rural development, expanded and diversified agricultural production, establishment of processing and manufacturing industries to suit local needs and resources, construction of embankments and canals, improvement and construction of village and district roads and local waterways, execution of schemes of public health and education.

33. The Pyidawtha programme aims not only at improving the physical environment and material welfare of the people but lays down as a major objective the reorientation of the people's attitudes and acts towards the perennial human values. Self-discipline, an altruistic spirit, Union consciousness, tolerance, honesty, hard work and thrift are some of the qualities to be inculcated. Through the Pyidawtha Committees it is intended to create a new man in the Union according to the motto: " Where the bricks are fallen we will build with hewn stones. "

CHAPTER VIII

AGRICULTURE AND IRRIGATION

1. Of the 12·8 million acres of paddy land before the war, about 2·2 million acres were still left uncultivated by 1959-60 due to breaches in flood protection embankments, silting up of drainage channels and other various causes. The production and the exportable surplus of rice in post-war years is well below that of pre-war and the latter is scarcely more than one-half of pre-war. However, acreage under other major crops except for cotton and pulses is well above pre-war level. The total crop acreage in 1959-60, therefore, falls short of the pre-war only by about 1·6 million acres. Efforts will have to be exerted to make good these shortcomings.

2. Union economy at present is still a one-crop economy. Over 70 per cent of the foreign exchange earnings is from the export of rice. The fluctuation in the world market of rice has serious effects on the finances and stability of the domestic economy. Such an undesirable situation cannot be alleviated until and unless Burma can reduce her dependence on her major crop, namely rice.

3. Realizing the above two major problems of expanding acreage and of diversification of agriculture, the agricultural programme is drawn up with the objectives of:—

(1) Diversification of the economy through a programme for diversified agriculture.
(2) Expansion of the acreage under crop through implementation of—
    (*a*) Land reclamation programme, and
    (*b*) Irrigation and flood control programme.

Agriculture and Rural Development Corporation

4. *Land Restoration Project.*—Objectives of the project is to bring back to cultivation, a minimum of 607,000 acres and to protect a further 947,000 acres of cultivated land from flood, with a view to increasing the production and export of rice. The detail programme under the land restoration project are indicated below:—

TABLE 64.—*Land Restoration Programme*

(In thousand acres)

—— (1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
Land Restoration				
(*a*) By embankments drainage channel ...	109	118	120	120
(*b*) By land clearing	35	35	35	35
(*c*) Flood protection	257	172	258	260

5. Along with the above programme, an intensive drive will be made for improvement in agricultural practices and increasing use of selected high yielding paddy seeds and crop pest control measures through the extension services of the Agricultural Department. In addition, to obtain increased yield per acre thereby increasing the income of the cultivators extensive measures will be taken to procure and distribute increasing quantities of fertilizers as indicated in table shown under paragraph 26.

The above programme is expected to result in the following increase in production in terms of rice and rice products:—

TABLE 65.—*Anticipated increase in Rice and Rice Products*

(In thousand tons)

— (1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)	1965-66 (6)
1. Land Restoration ...	80	152	229	306	383
2. Flood protection ...	30	62	84	116	148
3. Use of fertilizers ...	30	45	90	180	360
4. Pest control	30	50	80	120	162
5. Use of improved seeds and better cultivation practices.	20	30	45	60	85
Total ...	190	339	528	782	1,138

Making allowances for increased domestic consumption due to increase in population, the estimated increase in the exportable surplus in terms of rice and rice products is as follows:—

TABLE 66.—*Estimated increase in Exportable Surplus*

(In million tons)

Year.		*Projected increase in production as a result of work done during the previous year.*	*Total Exportable Surplus.*
1961-62	...	0·19	2·17
1962-63	...	0·34	2·30
1963-64	...	0·53	2·47
1964-65	...	0·78	2·70
1965-66	...	1·14	3·04

6. It should be pointed out that the successful implementation of the above programme rests to a large extent on the resettlement of the newly restored land. To induce settlers on these new lands measures for distribution of seed and implements and tractor service for land preparation on deferred payment basis have been formulated for implementation.

7. *Farm Mechanization.*—The agricultural pattern is considerably governed by nature and hence in implementing the proposed diversification programme it becomes imperative to harness and outwit nature, since our rainfall pattern is such that we have five wet months in the year with the remaining seven months being practically dry. To get a good crop from the low lying flooded area, dry ploughing which cattle cannot perform, is a must. Furthermore, the existing draught cattle population is just sufficient for one crop only. Therefore any plan for diversification of agriculture makes it imperative to resort to irrigation and farm mechanization to some extent. During the Plan period, a total of 2,400 tractors will be procured and put into operation. This will bring up the total to 2,900 tractors by the end of the Plan period. Farm mechanization and pump distribution project will jointly bring about an increase of 700,000 acres under double cropped area.

8. *Pump Distribution Project.*—The diversification of agriculture calls for promotion of double and triple cropping practices. With a view to promote pre-monsoon cultivation of jute and to successfully raise crops against the vagaries of weather, the ARDC has proposed pump distribution project where irrigation by gravitation is impossible and pump irrigation is necessary. Under this project, pumps totalling 11,000 will be procured and out of this total 8,000 sets will be sold to cultivators on instalment payment basis and the rest will be used for demonstration purposes. Some 400,000 acres will benefit from use of these pumps.

9. *Cotton Project.*—The present production and export fall short of not only of those of pre-war, but of requirement as well. And the main varieties available in the Union at present, *viz.*, Wagale and Mahlaing No. 3 are not suitable for the existing textile mills. Replacement of these varieties by Mahlaing No. 5 and other Long Staple types is urgently needed if the existence of these spinning mills is to be of utmost advantage to the country. Moreover, foreign exchange can be earned by exporting the surplus cotton. Expansion both quantitatively and qualitatively is necessary. At present (1960) 20,000 acres under long staple cotton produced only about 3,000 bales of lint while the requirement of the two existing spinning mills alone comes up to more than 22,000 bales at the present level of production. The area to be expanded and the estimated production during the Plan years are as follows:—

TABLE 67.—*Cotton Expansion Programme*

Year.		*Area to be cultivated.*	*Lint bales to be produced.*
1961-62	...	40,000	10,000
1962-63	...	75,000	20,000
1963-64	...	100,000	30,000
1964-65	...	125,000	40,000

10. To achieve the above-mentioned targets, the following measures will be undertaken:

(1) Pure seed selection and multiplication will be carried out on 1,500 acres of Hlaingdet Farm and District farms to be opened during the four years.
(2) Advice on systematic cultivation will be given specially on selection of land, and pest and disease control.
(3) Distribution of loans, implements and fertilizers.
(4) Farmers will be helped with tractors for land preparation and pumps for irrigation.
(5) Extensive measures will be taken for effective control of pests and diseases.
(6) All cotton produced by the farmers will be purchased and separately ginned to protect the interest of the farmers. Lint thus produced will be sold to Thamaing Spinning Mill and the surplus to private traders and exporters.

11. *Groundnut Project.*—The area under groundnut cultivation at present is 1·1 million acres. This is 35 per cent above pre-war level. Yet the Union had to import groundnut oil to the annual average value of K 24 million during the four years ending 1959. In terms of tonnage, it is about 20,000 tons. Assuming a 2 per cent annual increase in oil consumption during the Plan period, the total deficit by the end of the Plan will be some 30,000 tons. At an estimated production of 1 ton per 10 acres, it is necessary to bring additional 3 lakhs acres under groundnut cultivation and the present programme provides for the required

acreage. Of this total acreage, 100,000 acres will be in the States under the supervision of the ARDC, while the Agriculture Department will be responsible of expansion of 200,000 acres in Burma Proper.

To achieve this objective, seeds will be distributed, tractor services will be rendered and price stabilization measures will be imposed when necessary. The following quantity for seeds will be distributed on deferred payment basis:

(*a*) Seed distribution by ARDC and Agricultural Department is as follows:

TABLE 68.—*Seed Distribution (Groundnut)*

(In baskets)

Year (1)	By ARDC (2)	By Agricultural Department (3)	Total (4)
1961-62	292,000	300,000	592,000
1962-63	272,000	300,000	572,000
1963-64	250,000	300,000	550,000
1964-65	250,000	300,000	550,000

(*b*) Tractor services will be made available on following acreage.

TABLE 69.—*Tractor Services*

Year (1)	In States by ARDC (2)	In Burma Proper by Agricultural Department (3)	Total (4)
1961-62	6,000	26,000	32,000
1962-63	6,000	29,200	35,200
1963-64	6,000	30,300	36,300
1964-65	6,000	41,000	47,000

(*c*) Expansion of acreages in the States and Burma Proper are as follows:

TABLE 70.—*Targets for Groundnut Acreage Expansion*

Year (1)	In States by ARDC (acres) (2)	In Burma Proper by Agricultural Department (acres) (3)	Total (acres) (4)
1961-62	40,000	50,000	90,000
1962-63	40,000	50,000	90,000
1963-64	15,000	50,000	65,000
1964-65	5,000	50,000	55,000
Total ...	100,000	200,000	300,000

12. *Sugarcane Project.*—The Union has been importing an annual average tonnage of over 28,000 tons of sugar during the past three years. This is more than pre-war five-year annual average import of 11,000 tons, despite a nearly twofold increase in domestic production.

of sugar. The project for self-sufficiency in sugar was first started in 1959 to help sugarcane growers improve their yield and income. The objective of the Plan is to obtain sufficient sugarcane for the State Sugar Mills at full capacities in the first instance by helping sugarcane cultivators through better methods of cultivation, tractor services, supply of better species, distribution of fertilizers, pest and disease control and systematic marketing. Systematic marketing includes registration of growers, preparation of yield estimates and estimates and allocation of sale of crop to the sugar mills at advantageous prices.

13. In order to meet the growing deficit by the end of the Plan period, it will be necessary to build 2 new factories in the country. It is hoped when one of the new factories will be finally completed during this Plan period, ARDC will be able to help the cane growers help themselves to increase their income and living conditions. The Corporation proposes the cultivation of sugarcane on additional 15,000 acres.

14. *Jute Project.*—From 1957 to 1959 the Union has been importing jute (including cuttings and waste) to the value of K 57·8 million. To stop this foreign exchange leakage and to promote double cropping and to earn more foreign exchange by exporting better quality jute, cultivation expansion plan has been drawn up for implementation during the Plan period. To ensure the realization of this ambition ARDC will provide (*a*) free use of pumps in addition to sales on credit, (*b*) tractor services on deferred payments, (*c*) cash loans to cover cultivation cost against the crops, (*d*) distribution of fertilizers and seeds at subsidized price, (*e*) fair and equitable price guarantee for various grades of jute, and (*f*) free technical advice.

15. The area to be expanded is scheduled as below:

TABLE 71.—*Targets for Jute Acreage Expansion*

(1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)
Total area under jute				
(*a*) Under pump irrigation ...	45,000	60,000	75,000	90,000
(*b*) Rainfed cultivation	12,000	15,000	17,500	20,000
Total ...	57,000	75,000	92,500	110,000
Expansion	17,000	18,500	17,500	17,500
Production targets (ton)	5,500	8,125	10,750	18,375

16. ***Rubber Project.***—At present, area under rubber plantation is 120,000 acres producing 13,000 tons annually. These trees are of wild variety and most of them being over 40 years have passed their most productive period. If replanting is withheld for a long time, it would become so uneconomic to work on these old plantations that the present level of production and export may deteriorate. On the other hand it is certain that there is an expanding market for natural rubber at a price which is competitive with that of synthetic rubber. In order to meet this competition from synthetic rubber, the cost of operation must be low and the yield high. Tapping the old plantation results in high cost and low yield. The urgent problem therefore is to substitute the old wild trees with modern high yielding varieties.

17. The interest of the country will be served in the short run as well as in the longrun by increasing rubber production to the extent possible. The Union is earning only about K 30 million from the export of rubber. Increased production of rubber will go a long way to get the much needed foreign exchange. In the long run, however, the demand for rubber products such as tyres will increase to such an extent and proportion that it will be uneconomic to continue importing the finished products while the major raw material is being exported. It is also a wise economic policy to have domestic demand developed for such an exportable raw material as rubber whose price fluctuation occasionally is very violent. With such eventuality in view, the rubber project was drawn up. The increase of rubber production in 1972-73 as a result of this project within the current Plan will be 25,000 tons.

18. There will be two separate parts in the project:

(*a*) To replant the existing over-matured and low yield varieties with high yielding strains.

(*b*) To extend plantation in areas suited for rubber from a land-use point of view.

Planting Programme scheduled for the next four years is as in the following:

TABLE 72.—*Targets for Rubber Plantation*

Year.		*Planting Programme.*	*Resulting increase in acreage.*
1961-62	...	12,000	12,000
1962-63	...	15,000	27,000
1963-64	...	21,000	48,000
1964-65	...	22,000	70,000

19. Although the ARDC had started the implementation of the Rubber Project in 1956-57, the work accomplished in terms of total acreage is only 10,450 and a seed garden of 457 acres in Mudon. Under Four-Year Plan additional seed gardens will be set up at Zayat Kwin in Insein district, Kawkareik in Karen State, Kangalay in Amherst district, Tavoy and Mergui towns. The above programme in relation to the work accomplished so far seems to be quite ambitious. In order to achieve this seemingly ambitious target funds have been provided for the purchase of high yielding improved seed from abroad and the distribution of the same to planters at reduced rates. Fertilizer will be supplied at a reduced price and barbed wire for fencing at cost.

20. Plans for easy financing at the time of replantation are being considered and the State Agricultural Bank has adopted a long-term plantation loan programme.

21. *Virginia Tobacco Project.*—Annually, Burma needed in the early fifties about 12 lakhs viss or 2,000 tons of cured Virginia tobacco. Thus the tobacco project was started in the year 1953-54. Prior to the implementation of the project there was almost no cultivation of this type of tobacco in the country. To get sufficient Virginia tobacco for the local cigarette industry, plans were drawn up to produce 12 lakhs viss annually by 1959-60. This amount would be just sufficient for the domestic industry by using together with a certain amount of American Virginia tobacco required for blending purposes.

22. The following targets and actual productions have been achieved up-to-date since the implementation of the project:

TABLE 73.—*Production of Virginia Tobacco*

Year	*Targets*	*Actual Production*
1953-54	...	14,000
1954-55	150,000	309,000
1955-56	450,000	541,000
1956-57	600,000	607,203
1957-58	900,000	1,663,870
1958-59	1,200,000	1,043,805*
1959-60	1,200,000	879,681*

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* Decline due to adverse weather, damages by pests and diseases as well as poor marketing conditions.

23. However, with the steady increase in the demand for cigarettes, it is necessary to revise the original target of an annual production of 12 lakh viss. By the end of the current Plan an annual production of 18 lakh viss will be achieved as shown in the following schedule:

TABLE 74.—*Production Targets for Virginia Tobacco*

Year	*Production Target (Viss)*
1961-62	1,400,000
1962-63	1,600,000
1963-64	1,800,000
1964-65	1,800,000

24. To achieve this targetted production ARDC proposes the following measures in the Plan period:

(*a*) Training programme on stipendiary basis for tobacco cultivation and curing.
(*b*) Distribution of tobacco seeds and seedlings at cost.
(*c*) Provision of free services in the control of pests and tobacco diseases.
(*d*) Provision of tractor service at cost.
(*e*) Provision of free technical advice on grading, curing and storage of tobacco.
(*f*) Provision of incentive to individuals for construction of tobacco curing barns through free technical assistance.
(*g*) Conducting of research and experiment on tobacco production on two 30-acre plots of upland soil in Upper Burma and Southern Shan States by means of sprinkler irrigation and disseminating the results of the experiment.

25. *Wheat.*—Although wheat sown acreage in 1959-60 is already 3 times that of pre-war 5 years average, the Union has still to import bulk of her wheat requirement from abroad. Efforts to expand production of this crop have been made in several areas including Shan States and Chin Special Division. Under the Four-Year Plan, the present wheat acreage of 100,000 acres will be raised to 200,000 acres by 1964-65.

26. *Fertilizer Distribution Project.*—In a country where diversified agriculture and multi-cropping are being planned, the chemical fertilizers become treasured materials. They will not only yield a larger crop but also replenish the soil that is being heavily depleted by multi-cropping. With this in view the Fertilizer Distribution project has been drawn up and

will be implemented within the plan period. The targets for the distribution of fertilizers are set as follows:—

TABLE 75.—*Distribution of Fertilizers by Types (Tons)*

Year. (1)		P2O5 fertilizer (2)	Nitrogen fertilizer (3)	Other Kinds (4)	Bone Meal (3)	Total (6)
1961-62 ...	...	10,000	15,000	1,500	1,500	28,000
1962-63 ...	...	23,500	24,000	2,000	1,500	51,000
1963-64 ...	...	45,000	45,000	3,000	2,000	95,000
1964-65 ...	...	67,000	67,000	3,000	2,000	139,000
Total	...	145,500	151,000	9,500	7,000	313,000

TABLE 76.—*Distribution of Fertilizers to Various Crops (Tons)*

Year (1)		Paddy (2)	Sugar-cane (3)	Jute and Groundnut (4)	Others (5)	Total (6)
1961-62 ...	...	20,000	5,000	2,000	1,000	28,000
1962-63 ...	...	40,000	6,000	3,000	2,000	51,000
1963-64 ...	...	80,000	6,000	5,000	4,000	95,000
1964-65 ...	...	120,000	6,000	7,000	6,000	139,000
Total	...	260,000	23,000	17,000	13,000	313,000

A fertilizer factory will be established during the plan period. The nature and volume of product required is presently under survey. K 550 lakhs have been provided under Industrial Development Corporation's allocation.

27. *Other Projects.*—The Plan provides for a number of other minor and/or experimental projects such as, improved Seeds project, Pest Control project, Fertilizer Experiment project, Implement Improvement project, Onion project, Sprinkler Irrigation Experiment project, Miscellaneous Crops project, Forest Industries project, Afforestation project, Horticulture project, Animal Husbandry project, Fishery project and Milk project.

The above projects to be implemented during the Plan period are intended not only to increase farm incomes but also to diversify agricultural production with a view to making agriculturists less dependent on one crop, thereby making them less vulnerable to vagaries of weather and foreign trade. In particular, projects on wheat, maize, castor, peas and beans, soya beans, vegetables and fruits, potatoes, tea and coffee and other food-stuff such as prawns and mutton will be given special emphasis.

The following targets are set for the selected crop projects:

TABLE 77.—*Programme for Selected Crops*

Crops (1)	Area to be demonstrated (acres) (2)	Area for expansion (acres) (3)	Fertilizers to be distributed (tons) (4)	Seeds to be distributed (tons) (5)
Castor	9,820	50,000	491	76
Maize	7,460	80,000	373	71
Peas and beans	15,040	200,000	752	236
Wheat	59,900	100,000	5,990	1,871

Irrigation Department

28. *Irrigation Project.*—As reported in the LAPC land-use surveys there are about 25 million acres of land in the Union which can ultimately be brought under cultivation by means of irrigation or drainage works. At present of the 17·4 million acres of land under crop, only 750,000 acres are under irrigation and 1,007,000 acres under flood protection. Plans have been drawn up for the coming four years to add 189,850 acres of cropped area to the existing area under irrigation and 39,000 acres under flood protection. These consist of irrigation, flood protection and drainage, pump irrigation and river training. The programme covers both upper and lower Burma with an emphasis on projects which will bring about immediate increase in paddy production. Care has also been taken to ensure that the projects envisaged in the Plan is within the technical and personnel capacity of the Irrigation Department with some additional staff.

The increase of cropped area under the projects is as follows:

TABLE 78.—*Irrigation Programme*

Project	Anticipated increase	Coverage of crops
Diversion Projects—		
(1) Ywamun Se	8,000	Paddy.
(2) Kinda Weir	22,000	Paddy
(3) Yinmale Se and Canals	4,500	Paddy.
(4) Yenatha canals	19,000	Paddy, sesamum, cotton, onions, miaze.
(5) Pin Se	3,000	Paddy.
(6) South Man	15,000	Paddy, groundnut, cotton, onion.
(7) Other diversion projects*	15,000	
Storage projects—		
(8) Mondaing modulating reservoir* ...	10,000	
(9) Yezin Chaung	18,750	Paddy, groundnut, sesamum, cotton, onions, chillies, pulses.
(10) North Nawin*	103,000	
(11) Mu Valley*	700,000	
(12) Yamethin district project*	600,000	
(13) Kyetmauktaung Dam and canals ...	41,000	Paddy, groundnut, sesamum, cotton, maize, pulses.
(14) Other projects*	...	
Lift Irrigation Projects—		
(15) Nyaung Oo pump project	1,000	Groundnut, sesamum, cotton, onions, chillies.
(16) Pakokku pump project	11,600	Groundnut, sesamum, cotton, onions, chillies.
(17) Dayindabo project	34,000	Paddy, groundnut, sesamum, cotton, onion, chillies, maize, pulses.
Village Irrigation Works—		
(18) Minor village works	12,000	
Flood Protection—		
(19) I.E.S.E.	5,000	Paddy.
(20) Nagadwin	18,000	Paddy.
Drainage—		
(21) Minor works	16,000	Paddy.

* Survey and investigation.

29. The Plan also provides for enabling the Irrigation Department to make preliminary survey and design of sizable irrigation projects for implementation as soon as financial situation permits.

30. *Agriculture Department.*—It is a fact that agricultural production depends not only on crop acreage but also on improved seeds; plant diseases, insects and pest control in addition to several unpredictable factors including climate. Agricultural planning must, therefore, accord pride of place to a programme for agricultural research and pest control in seeking to increase agricultural production.

31. *Pest Control Project.*—The value of agricultural products amounted to nearly K 2,000 million. It was estimated that annually about 7 per cent of the crops or K 140 million worth of crop may be damaged due to pest. Thus pest and disease control project was initiated in 1957-58 with the following objectives:

(1) To try and save crops from damages (valued at K 140 million) as much as possible, adding more income to the nation.

(2) To give education to farmers on methods of control of pests and diseases of crops so that they could later on take up the total responsibility of control by themselves.

(3) To help the farmers get more income by protection against damages.

Equipments were brought and put to use in 32 districts on a demonstration basis. There are 96 trained workers for the District Pest Control Squads. Each squad takes responsibility of a district, with the help of farmers. Government provides insecticides and fungicides as far as possible. It is hoped that after seeing the effectiveness of the use of such insecticides, farmers will be willing to carry on the work by themselves in future.

32. The results of the demonstration during the past two years have been encouraging. An average of about 75,000 acres was brought under this programme. Funds have been liberally provided for in the Plan period.

33. *Mechanical Harvesting.*—Some regions felt shortage of agricultural labour in the past few years. Also double cropping requires a shorter period of harvest. To solve these problems the Agricultural Department conducted research in mechanical harvesting. This research will be continued.

34 *Fertilizer Experiment Project.*— Fertlizer research has been conducted on experimental farms in eight Agricultural Circles. Research covers various crops. Much valuable data have been obtained from the research carried out thus far. Of the various types of fertilizer the farmer is required to use the right type of manure in the right amount and in right time. And studies will be made of the right treatment for all the 14 crops grown in all the districts, the crops being, paddy, groundnut, sesamum, cotton, sugar-cane, *pebyugale* gram, butterbean, wheat, saccolein, tobacco, maize, onion and jute. Research has to be conducted for various crops to be grown in accordance with soils classified by Land Use Bureau. The result of the research will be divulged to the farmers' advantage.

35. *Agricultural Research Project.*—Agricultural Research has been recognized as a basic requirement for agricultural development. Plans for the establishment of an Agricultural Research Institute was adopted in 1956. There are three phases of implementation; after the first phase work had to be suspended due to financial stringency. For the present Plan in addition to completing the Agricultural Research Institute, Gyogon, another Agricultural Research Institute is being proposed at Kyaukse. This is not to duplicate the work

of ARI, Gyogon. The two institutes in co-operation will undertake fundamental agricultural research. Both the Institutes together with their satellite experimental farms will help the extension workers achieve their main objectives of helping the farmers to raise their incomes through—

(*a*) use of improved seeds;
(*b*) use of improved cultural practices;
(*c*) use of better manures as fertilizers and other measures to improve the soil;
(*d*) use of insecticides and fungicides to control pests and diseases of crops, and
(*e*) use of weedicides to control weeds.

36. *Soil Survey Project.*—In the past, adaptation of crop according to the type of soil was little taken into consideration. The present Four-Year Plan enjoins the Soil Bureau to undertake medium scale Soil Survey (80 Million acres) and detailed soil survey (for 276,000 acres farm planning).

37. *Survey Department.*—The department has planned to undertake aerial photography, ground control, survey, mapping with the help of these photographs and control points and map printing in order to distribute maps and aerial photos requirement by the various department, Boards and Corporations.

38. *Veterinary Department.*—The Four-Year Plan provides for the construction of buildings and purchase of laboratories equipments for the Veterinary Research Institute. Extensive research on scientific method of raising poultry and animal husbandry will be undertaken with a view to fostering such industry throughout the country.

39. *Agricultural Credit.*—Realizing the need and usefulness of credit for the development of an economy, a Working Party on Agricultural Finance was formed and ways and means of regulating credit flow was discussed. Based on the recommendations of the Party, plans are made to provide credit over K 170 million annually by the end of the Plan period. The operation of the State Agricultural Bank will be expanded by more than 50 per cent during the coming four years.

40. *Soil Conservation.*—In addition to soil conserving projects such as fertilizer distribution and research project, irrigation project and soil classification for farm planning purposes, afforestation project will be launched where soil erosion indicate the need for it. So far over 300,000 acres have been afforested and protected from erosion. Plans are being made to expand the area protected under this project by over 100,000 acres at the end of the Plan period.

41. *Fisheries.*—With a view to promotion of fish hatcheries throughout the country, the ARDC had started its fishery section as early as 1954. Up-to-date 55 acres of brackish water demonstration ponds have been established, over 200,000 fish seeds have been distributed in addition to demonstration work on offshore fishing by four long liners and collection and nursing of over 2 million major carps sprawn. In order to expedite the progress of fish hatching industry on the one hand and conservation of natural supply of inland as well as offshore fish on the other, a Directorate of Fisheries has been set up.

42. *Settlement and Land Records Department (Collection of Basic Statistics on Rural Economy).*—The Settlement Department and Land Records Department will be combined. Under the Plan, the department will direct its efforts towards the collection of basic statistics on rural economy and Survey and investigation into agricultural statistics for the Union with an extensive base and coverage on village and form level. In addition, the department will increase its activities in the administration of land and assessment and fixation of Land revenue.

43. *Other Departments.*—The Land Nationalization Department will continue to discharge its functions while the compensation Department will continue to settle claims. The State Colonies Department will make a major contribution to the organization of agriculture in co-operatives.

44. *State Agricultural Bank.*—Under the Four-Year Plan, the State Agricultural Bank will undertake the following measures :

(*a*) Initiation of a single system of state agricultural credit in certain districts.
(*b*) Systematic organization and establishment of new village banks under the supervision of the district branches of the State Agricultural Bank.
(*c*) Helping the defaulters of the General Administration Loan to repay the debts by instalment or by remission thereby enabling them to secure membership in the village banks.
(*d*) Granting of long-term plantation loans by the State Agricultural Bank to encourage the plantation of tea, orange, rubber and coffee.
(*e*) Increased activities of the Government Agency Department of the Bank.

As a special project, the State Agricultural Bank plans to form village banks in every village-tract in Tharrawaddy district in 1961-62, in Shwebo and Henzada districts in 1962-63, in Sagaing and Myaungmya districts in 1963-64 and in Monywa and Prome districts in 1964-65.

Total agricultural loans to be distributed by the State Agricultural Bank are shown in the following table:—

TABLE 79.—*Agricultural Credit Programme under Four-Year Plan of the State Agricultural Bank*

(K Lakhs)

Year (1)	Under increased activities of the Bank (2)	Under Special project (3)	Under Long-term Loan project (4)	Under Government Agency Department (5)	Total (6)
1961-62	800	50	50	350	1,250
1962-63	950	50	50	340	1,390
1963-64	1,100	50	50	320	1,520
1964-65	1,300	50	50	300	1,700

45. *State Agricultural Marketing Board.*—With a view to improve the quality of the products and also to strengthen Burma's competitive position in the international rice market, the Board has designed several projects such as modernization and renovation of rice mills, construction of storage godowns, pest control and improvement in handling and movement of rice.

The Board has planned to construct, as model mills, three two 25 ton rice mills, and one 50 ton rice mill and long-term loans will be distributed to the millers for renovation and repair of rice mills. The storage capacity of the Board will be expanded with the construction of additional 30 permanent godowns in the Plan period. For the acceleration of the quality drive, the Board intends to employ modern equipments such as driers, aeriation equipment pest control instruments and moisture testers. The scientific laboratory appliances will be used in milling research to be conducted by the Board. For mechanical handling at Port of Rangoon, the Board will procure additional tractors and trailers.

The construction and improvement activities of the Board are indicated in the table below :

TABLE 80.—*Construction and Improvement Activities SAMB*

(In numbers)

—	1961-62	1962-63	1963-64	1964-65	Total
1. Construction of storage godowns	5	10	10	5	30
2. Construction of new mills ...	2	1	...	...	3
3. Use of driers	5	5	5	5	20
4. Use of moisture testers ...	500	500	500	500	2,000
5. Use of tractors	6	6	...	...	12
6. Use of trailers	18	18	...	...	36

AGRICULTURE IRRIGATION (SUMMARY)

TABLE 81.—*Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65)

(In K lakhs)

Sr. No.	Name of Agency or Projects (1)	1961-62		1962-63		1963-64		1964-65		Total	
		Total (2)	F.E. (3)	Total (4)	F.E. (5)	Total (6)	F.E. (7)	Total (8)	F.E. (9)	Total (10)	F.E. (11)
A	Agricultural and Rural Development Corporation.	640·62	404·36	517·28	283·04	515·95	282·43	545·12	297·55	2,218·97	1,267·38
B	Irrigation Department	120·75	41·76	134·90	48·20	151·70	53·50	193·25	67·00	600·60	210·46
C	Agriculture Department	20·18	11·28	20·46	11·57	23·31	14·43	8·80	5·80	72·75	43·08
D	Soil Bureau	0·82	0·70	0·40	0·30	0·40	0·30	0·40	0·30	2·02	1·60
E	Survey Department	11·76	...	0·86	...	...	...	...	...	12·62	...
F	Veterinary Department	12·64	4·21	5·93	1·98	2·50	0·83	...	...	21·07	7·02
G	State Agricultural Marketing Board ...	98·00	26·47	55·00	26·13	48·00	21·30	38·50	16·30	239·50	90·20
	Total ...	904·77	488·78	734·83	371·22	741·86	372·79	786·07	386·95	3,167·53	1,619·74
A	**Agricultural and Rural Development Corporation.**	**640·62**	**404·36**	**517·28**	**283·04**	**515·95**	**282·43**	**545·12**	**297·55**	**2,218·97**	**1,267·38**
1	Land Restoration Project	174·94	41·30	156·07	40·20	153·86	39·16	160·00	40·00	644·87	160·66
2	Cotton Project	9·30	7·00	13·60	7·10	13·60	7·10	...	...	36·50	21·20
3	Sugarcane Project	0·09	0·09	...	...	...	...	...	...	0·09	0·09
4	Rubber Project	3·81	1·03	8·64	0·55	9·70	0·78	10·11	0·79	32·26	3·15
5	Jute Project	14·52	0·68	13·42	1·02	13·59	1·19	17·84	2·59	59·37	5·48
6	Sprinkler Project	0·25	0·25	0·25	0·25	0·25	0·25	0·25	0·25	1·00	1·00
7	Forest Industries Project	0·34	0·21	0·34	0·21	0·34	0·21	0·34	0·21	1·36	0·84
8	Afforestation Project	0·89	...	1·73	...	1·73	...	1·73	...	6·08	...

9	Horticulture Project	3·53	0·90	3·78	0·70	3·78	0·70	3·78	0·70	14·87	3·00
10	Milk Cow Project	0·42	...	...	...	...	...	...	...	0·42	...
11	Draft Animal Project	0·10	...	0·40	...	0·40	...	0·40	...	1·30	...
12	Poultry Farm Project	0·07	...	0·24	...	...	...	...	...	0·31	...
13	Animal Husbandry Project	0·44	...	...	...	...	...	...	...	0·44	...
14	Fishery Project	0·17	...	0·12	...	...	...	...	...	0·29	...
15	Milk Project	0·42	0·16	0·23	0·16	0·26	0·19	0·23	0·16	1·14	0·67
16	Virginia Tobacco Project	0·28	0·10	0·04	...	0·02	...	0·02	...	0·36	0·10
17	Pump Project	82·44	72·04	43·12	37·50	43·12	37·50	43·12	37·50	211·80	184·54
18	Irrigation Project (Kyetmauktaung Dam and Canal).	40·00	5·00	80·00	20·00	80·00	20·00	112·00	40·00	312·00	85·00
19	Russian Project	0·61	0·25	...	...	...	...	...	...	0·61	0·25
20	Mechanization Project	308·00	275·35	195·30	175·35	195·30	175·35	195·30	175·35	893·90	801·40
B	**Irrigation Department**	**120·75**	**41·76**	**134·90**	**48·20**	**151·70**	**53·50**	**193·25**	**67·00**	**600·60**	**210·46**
	(*a*) Diversion Project—										
	1. Ywamun Se	3·00	...	3·00	...	...	...	...	...	6·00	...
	2. Kinda Weir	9·44	2·00	7·70	2·00	...	...	...	...	17·14	4·00
	3. Yinmale Se and Canals ...	8·60	...	...	...	...	...	...	...	8·60	...
	4. Yenatha Canals	10·00	2·00	20·00	2·00	10·00	...	...	...	40·00	4·00
	5. Pin Se	3·00	...	3·00	0·50	...	...	...	...	6·00	0·50
	6. South Mam	5·00	2·00	10·00	1·00	...	...	...	...	15·00	3·00
	7. Fairly Small Diversion Projects...	8·50	1·00	...	...	...	...	...	...	8·50	1·00
	(*b*) Storage Projects—										
	8. Mondaing modulating reservoir ...	0·40	...	0·20	...	5·00	...	30·00	6·00	35·60	6·00
	9. Yezin Dam (Y.D.I.P.) ...	0·50	...	3·00	0·50	35·00	10·50	3·50	...	42·00	11·00
	10. North Nawin Project ...	7·00	2·87	15·00	6·00	15·00	1·00	30·00	5·00	67·00	14·87

TABLE 81.—*Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65)—concld.

(In K lakhs)

Sr. No.	Name of Agency or Projects (1)	1961-62 Total (2)	1961-62 F.E. (3)	1962-63 Total (4)	1962-63 F.E. (5)	1963-64 Total (6)	1963-64 F.E. (7)	1964-65 Total (8)	1964-65 F.E. (9)	Total Total (10)	Total F.E. (11)
	(*b*) Storage Projects—*concld.*										
	11. Mu Valley Project	40·00	25·00	40·00	25·00	40·00	25·00	40·00	25·00	160·00	100·00
	12. Yamethin District Projects including Thitson and Yezin.	...	...	10·00	6·00	20·00	12·00	50·00	25·00	80·00	43·00
	13. Miscellaneous Projects ...	0·70	...	2·00	...	2·00	...	2·00	...	6·70	...
	(*c*) Lift Irrigation Project—										
	14. Nyaung Oo Pump Project ...	1·17	1·17	...	...	...	...	...	...	1·17	1·17
	15. Pakokku Pump Project ...	3·00	2·00	6·00	3·00	6·70	3·00	...	...	15·70	8·00
	16. Dayindabo Pump Project ...	1·80	0·72	3·00	1·20	8·00	1·00	24·75	5·00	37·55	7·92
	(*d*) Village Irrigation Works— ...										
	17. Minor Village Works (Irri.) ...	4·00	...	3·00	...	3·00	...	3·00	...	13·00	...
	Sub-Total (I) ...	106·11	38·76	125·90	47·20	144·70	52·50	183·25	66·00	559·96	204·46
	(*e*) Flood Protection—										
	18. I.E.S.B.	0·95	...	...	...	...	...	...	...	0·95	...
	19. Nagadwin Paukpin	2·00	0·50	2·00	...	...	...	...	...	4·00	0·50
	(*f*) Drainage Works—										
	20. Minor Works (Irri.) ...	2·00	...	2·00	...	2·00	...	5·00	...	11·00	...
	(*g*) Building Construction and Miscellaneous Works—	9·69	2·50	5·00	1·00	5·00	1·00	5·00	1·00	24·69	5·50
	Sub-Total (II) ...	14·64	3·00	9·00	1·00	7·00	1·00	10·00	1·00	40·64	6·00

C	**Agriculture Department**	20·18	11·28	20·46	11·57	23·31	14·43	8·80	5·80	72·75	43·08
1	Storage Godowns (40 godowns) ...	5·00	2·00	5·00	2·00	5·00	2·00	5·00	2·00	20·00	8·00
2	Plant Disease and Pest Control ...	2·27	2·27	2·57	2·57	5·30	5·30	2·10	2·10	12·24	12·24
3	Fertilizer Research Project	0·63	0·63	0·63	0·63	...	...	...	...	1·26	1·26
4	Mechanised Harvesting and Threshing Experiment Project.	0·74	0·74	0·73	0·73	0·73	0·73	...	...	2·20	2·02
5	Implement Improvement Project ...	0·85	0·85	0·85	0·85	1·60	1·60	1·70	1·70	5·00	5·00
6	Agricultural Research Institute ...	10·69	4·79	10·68	4·79	10·68	4·80	...	...	32·05	14·38
D	**Soil Bureau**	0·82	0·70	0·40	0·30	0·40	0·30	0·40	0·30	2·02	1·60
1	Touring Car	0·32	0·30	...	...	...	...	...	...	0·32	0·30
2	Purchase of Chemicals and Equipment ...	0·50	0·40	0·40	0·30	0·40	0·30	0·40	0·30	1·70	1·30
E	**Survey Department**	11·76	...	0·86	...	...	...	...	...	12·62	...
1	Purchase of Motor Vehicle	1·30	...	0·86	...	...	...	...	...	2·16	...
2	Purchase of equipment	10·46	...	...	...	...	...	...	...	10·46	...
F	**Veterinary Department** ...	12·64	4·21	5·93	1·98	2·50	0·83	...	...	21·07	7·02
	Veterinary Research Institute ..	12·64	4·21	5·93	1·98	2·50	0·83	...	...	21·07	7·02
G	**State Agricultural Marketing Board** ...	98·00	26·47	55·00	26·13	48·00	21·30	38·50	16·30	239·50	90·20
1	Lands and Buildings—										
	(*a*) Storage Godowns	10·00	5·00	20·00	10·00	20·00	10·00	15·00	5·00	65·00	30·00
	(*b*) Office and other buildings ...	5·00	...	5·00	...	5·00	...	6·50	...	21·50	...
2	Loose Tools and Equipment	3·00	3·00	3·00	3·00	3·00	3·00	3·00	3·00	12·00	12·00
3	Motor Cars and Trucks	1·50	0·80	1·50	0·80	1·00	0·80	1·00	0·80	5·00	3·20
4	Launches and Boats	3·00	...	3·00	...	3·00	...	3·00	...	12·00	...
5	Plant and Machinery—										
	(*a*) Mechanical Handling	7·50	1·50	7·50	1·50	6·00	...	...	...	21·00	3·00
	(*b*) Driers	10·00	7·50	10·00	7·50	10·00	7·50	10·00	7·50	40·00	30·00
6	Bran Oil Extraction	45·00	...	...	...	...	...	...	...	45·00	...
7	Extension Projects	3·00	2·00	...	...	...	...	...	...	3·00	2·00
8	Rice Mills	10·00	6·67	5·00	3·33	...	...	...	...	15·00	10·00

CHAPTER IX

FORESTRY

1. Forests are one of the foremost natural assets of the Union. The fact that forests cover 57 per cent of the total land surface of the country out of which 13 per cent is put under scientific forest exploitation and reservation shows the importance of the role played by the forest sector in the economy of the Union. The Burma forests consist of a variety of valuable forest species. Before the war, the export of timber and forest products constituted approximately 7 per cent of the value of all exports. Immediately after the war, the volume of timber production as well as that of exports especially teak declined considerably, the reasons for the decline being the tremendous losses sustained by elephant herds, over half of which were killed in the war years 1942—45, and lack of the necessary reserves of ripe girdlings, logs in course of extraction and logs in floating streams. Substitution of other materials for Burma timber in overseas markets during the war was a factor in reduction of exports. Accordingly, the proportion of export of timber in the immediate post-war years shrank to 3 per cent of value of all exports. This necessitated the tremendous task of rehabilitation of the physical assets and re-establishment of the overseas market after the war. Unfortunately internal disturbances further retarded and hampered the tasks of systematic rehabilitation and administration.

2. The Government nonetheless made systematic plans and energetic efforts to put the forests under sicentific exploitation on the one hand, and on the other hand, to increase the production and promote export of timber to the extent feasible. Although the pace of re-establishment of overseas market staggered in the immediate post-war years, of late it has been rather encouraging. In fact, recently there are occasions when the STB has to slip some of the overseas orders or requests due to shortage of quality teak.

TABLE 82.—*Production and Export of Timber*

—— (1)	Pre-war Average (1936—40) (2)	1952—56 Average (3)	Per cent of 1952—56 to pre-war average (4)	1956—60 Average (5)	Per cent of 1956—60 to pre-war average (6)
Production of Teak (tons) ...	453,481	135,572	30	231,283	51
Production of Hardwood (tons) ...	501,866	528,093	105	650,982	130
Export of Teak (tons) ...	227,283	36,471	16	74,174	33
Export of Hardwood (tons) ...	43,111	14,580	34	15,420	36

As may be seen, the production as well as the export of forest products registered a slow but gradual progress during the past decade. However, with the improvement of administration of law and order and the introduction of mechanization of extraction at certain stages, production of timber, especially teak, recorded substantial increases in the latter half of the past decade. In fact, the production of teak almost doubled during these five years. Export of timber however did not increase correspondingly as a result of the loss of the inferior teak market in India. The increase in the production of teak so far was mainly the result of efforts made by the State Timber Board.

3. Provision is therefore made in current State Timber Board's Four-Year Plan (1961—65) to further expand the operation of the Board with a view to increasing both production and export to the pre-war level. This requires all out effort not only on the part of STB but also of the private sector. In other words, if the targeted productions are to materialise private initiatives and capacities will have to be co-opted, developed and taken advantage of in this current Plan. Accordingly, therefore, a start has been made in this direction after thoroughly studying the measures deemed necessary for such development.

4. The overall targets for extraction of teak set by the STB in the Plan period are as follows:

TABLE 83.—*Overall Targets for Extraction of Teak*

(In lakhs of cubic tons)

		Input into streams	*Outturn to mills*
1960-61	...	3·59	2·74
1961-62	...	3·80	3·54
1962-63	...	4·00	3·65
1963-64	...	4·80	4·00
1964-65	...	5·00	4·50

According to the Plan there will be increases of 39 per cent and 64 per cent in the Plan period in input of logs into streams and outturn of logs to sawmills respectively. In order to successfully implement these targets, the Plan envisages the expansion of extractive capacity of the Board by purchases of two mechanised extraction units, one each in 1961-62 and 1962-63. Each unit will have an extractive capacity of 12,000 tons a year and will cost K 25 lakhs each. At present there are four mechanised extraction units in the country. Each of the proposed mechanised extraction unit comprises 5 tractors, 1 autograder (for making roads), 1 loggersdream, 1 workshop lorry, 3 one hundred per cent traction walter trucks and 15 chain saws. There is also a provision in the Plan for the purchase of additional elephants to replenish the dwindling stock. So far the extraction of teak has virtually been solely in the confine of STB activities. During this Plan period, however, interested private concerns in this field will not only have sympathetic consideration but also positive encouragement, so that the abovementioned target may materialise.

5. Targets of the STB for sawmilling in the Plan period:

TABLE 84.—*Targets for Milling Capacity*

(In lakhs of cubic tons)

		Throughput	*Outturn*
1960-61	...	1·50	0·75
1961-62	...	1·88	0·87
1962-63	...	2·17	1·05
1963-64	...	2·25	1·08
1964-65	...	3·48	1·69

To cope up with the planned increases in timber extraction, the milling programme calls for increase in milling capacity. Accordingly the Plan provides for the increases of milling capacity throughput and outturn during the Plan period by 132 per cent and 125 per cent respectively. This increase in sawmilling capacity has been planned to be finally brought about by the construction of a new sawmill having a throughput capacity of 75,000 tons per year. The new sawmill is estimated to cost about K 250 lakhs and is expected to start operation only at the end of the current plan. As such, ways and means have been found to increase the milling capacity immediately. To this end, the Board plans to undertake renovation and extension of existing sawmills as an interim measure. The addition of new facilities and renovation and extension of the existing mills will cost approximately K 47 lakhs. The proposed renovation and extension of existing mills will be made as follows:

(*a*) Introduction of a second shift in No. 3 Sawmill.
(*b*) Replacement of old equipments in No. 5 Sawmill.
(*c*) Renovations of No. 3 and No. 6 Sawmills.
(*d*) Extension of No. 4 Sawmill.

The renovation and extension of existing mills alone is expected to increase throughput capacity from the present level of 150,000 cubic tons to 348,000 tons at the end of the Plan period. However in view of the fast deterioration in the technical efficiency of the existing mills, some of which will become uneconomic or inoperative in the near future, the milling capacity of the Board will remain more or less constant at a milling throughput capacity of about 350,000 cubic tons even when the new sawmill is operating at full swing. It will be noticed that this throughput capacity is considerably short of the tonnage of outturn of logs to mills. This discrepancy in the milling capacity will be made good by improving and extending the private mills with the help and co-operation of the State Timber Board.

6. Export targets as envisaged in the Plan are shown below:

TABLE 85.—*Export Targets*

— (1)	1960-61 (R.E.) (2)	1961-62 (3)	1962-63 (4)	1963-64 (5)	1964-65 (6)
Logs (tons)	25,400	26,400	26,400	26,400	26,400
Sawn timber (ton)	72,000	84,460	100,285	106,100	152,600
Total (ton) ...	97,400	100,860	126,685	132,500	189,000

The fact that due emphasis has been given to export of timber in the Plan is evidenced by a proposed more than two fold increase in the target for export of teak. Since a few years ago, the Union exports, in addition to sawn timber, dry round logs as well as green and semi-green teak logs. During the Plan period, it is planned to export at the rate of 26,400 tons of dry-round logs per year. The export of green and semi-green teak logs is not included in the above plan target as it is very much conditional on the availability of high quality teak in the truckable area as well as the demand for it. Yet the export of same will be made whenever there is demand for it. In pre-war days approximately 225,000 tons of sawn timber were exported annually, the great bulk of which went to India. At present, the export of it is only about one-third of the pre-war level. It is planned to increase export of sawn timber to approximately 68 per cent of the pre-war level at the end of the Plan period. It should however, be pointed out here that the targeted level of export of sawn timber is substantially below the targeted production and milling capacities. This is due to the fact that a higher level of stocks of logs will be required to backstop a higher level of export and domestic market.

7. In order to achieve the proposed targets for the export of round logs and also be prepared to cope with the contingent demand for export of green and semi-green teak, there

is a plan for the purchase of handling equipment for handling of heavy round logs at the ports. A provision of K 52 lakhs has been allocated in the Plan.

8. In addition to these projects a veneer and plywood factory is to be attached to the new sawmill. The Board has been actuated to take up this project in order to take advantage of the existence of a large veneer and plywood market and thereby earn additional foreign exchange. Also, it is partly to substitute the export of roundlogs from which the foreign buyers are known to manufacture plywood and veneer. This project will also facilitate the economic use of scantlings and inferior quality timber for which the pre-war market is fast deteriorating.

9. Although the production of non-teak wood has exceeded pre-war level since 1953, it remained more or less constant at slightly above 600,000 tons for the past few years. This was due to lack of adequate rolling capital at reasonable cost among timber traders and the demand by domestic market has probably reached the saturation point. The Forest Department's plan therefore envisages the extraction of over 600,000 tons of hardwood annually. This level of extraction will be expanded if demand for it arises. It should be pointed out that the annual production of 600,000 tons of hardwood is still below that of the sustained yield of some one million cubic tons annually. It is therefore necessary that, if the abundant natural resources is to be of maximum benefit to the country, reasearch for new and economic uses of the various timbers should be made. An intelligent exploitation of the same must also be observed and administered if this resource is not only to last but also to grow.

10. With this end in view the Forest Department envisages the necessity of establishing Forest Research Institute. The proposed Institute will conduct research on methods of protection, maintenance and improvement of the forests, and regulation of yields and extraction. The cost of construction of the Institute is estimated at approximately K 84 lakhs and is to be manned by forest staff who are trained, and/or are undergoing training abroad. Under the auspicious of FAO, the services of experts were made available in drawing up schemes for the Institute. The outline plan has since been submitted and accepted by the Government. Construction of the Institute can, therefore, be started forthwith.

11. As regards plans for maintenance and conservancy of forests in easily accessible areas, that is to say, those lying near village-tracts and motor roads which were badly destroyed due to the World War II and insurgency, the Forest Department is making systematic plans and energetic efforts towards their rehabilitation and proper maintenance so as to ensure constantly, adequate supply of the household necessities of forest produce. Regarding reserved forests on mountainous slopes and ravines which are exploited for commercial purposes, the Forest Department has proposed to undertake the following measures during the Plan:

(*a*) Natural regeneration of forests namely protection of fire and clearing of creeping plants, will be carried out at the average of 17,500 acres annually during the Plan period.

(*b*) In places where natural regeneration of forest cannot be successfully undertaken, artificial regeneration will be done.

(*c*) In order to enable maximum growth to valuable trees, clearing of undergrowths and creeping plants and improvement fellings is proposed to be carried out at the rate of 42,500 acres annually during the Plan.

(*d*) Thinnings of thickly growth forests will also be made and reafforestation of barren lands in central parts of the Union will be carried out.

(*e*) In order to prevent the destruction of forests by land erosions and land-slides more forests will be put under reservation. There is a plan to extend reserved forests by 7,500 sq. miles during the Plan period.

12. Forests in easily accessible areas are relatively less abundant compared to valuable hardwood in remote parts of the forests which still remain untapped. At present, hardwood is economically extracted only within about 26 per cent of the total reserved forest area. With a view to exploit those virgin forests while the relatively depleted forests are being allowed to grow, plans have been made by the Forest Department to construct new forest roads and selected old roads resurfaced and improved. For these purposes a sum of K 94 lakhs is provided in the Plan. In addition, systematic efforts to exploit minor forest produce such as lac and resin, bamboo, woodfuel and charcoal will be made.

13. Last of all, measures will be introduced for the standardization of forest measurements and nomenclatures in conformity with those employed in international market. This project will require only a modest capital investment and the undertaking of this project is fully justified for a country like the Union of Burma which has an extensive international timber market and a relatively stagnant domestic demand as indicated earlier.

TABLE 86.—*Capital Expenditure Under Four-Year Plan* (1961-62 *to* 1964-65)

(In K lakhs)

Sr. No. (1)	Name of Agency or Projects (2)	1961-62 Total (3)	1961-62 F. E. (4)	1962-63 Total (5)	1962-63 F. E. (6)	1963-64 Total (7)	1963-64 F. E. (8)	1964-65 Total (9)	1964-65 F. E. (10)	Total Total (11)	Total F. E. (12)
A	Forest Department	82·00	11·06	49·33	1·50	40·44	0·30	23·40	0·20	195·17	13·06
B	State Timber Board ...	106·90	57·67	104·34	58·80	148·47	71·72	122·65	48·55	482·36	236·87
	Total ...	**188·90**	**68·73**	**153·67**	**60·30**	**188·91**	**72·02**	**146·05**	**48·75**	**677·53**	**249·80**
	A. Forest Department ...	**82·00**	**11·06**	**49·33**	**1·50**	**40·44**	**0·30**	**23·40**	**0·20**	**195·17**	**13·06**
1	Forest Research Institute ...	44·04	10·50	23·01	...	16·78	...	...	...	83·83	10·50
2	Extension of Reserved Forest ...	0·01	...	0·12	...	0·16	...	0·20	...	0·49	...
3	Construction and gravelling of forest road.	34·40	...	20·00	...	20·00	...	20·00	...	94·40	...
4	Construction of Forest Buildings	1·99	...	2·50	...	3·00	...	3·00	...	10·49	...
5	Lac	...	...	2·00	1·00	0·20	0·20	0·10	0·10	2·30	1·30
6	Turpentine and Resin ...	...	...	1·50	0·50	0·10	0·10	0·10	0·10	1·70	0·70
7	Standardization of Forest measures.	0·10	...	0·20	...	0·20	...	...	...	0·50	...
8	Others	1·46	0·56	...	...	...	...	...	...	1·46	0·56
	B. State Timber Board ...	**106·90**	**57·67**	**104·34**	**58·80**	**148·47**	**71·72**	**122·65**	**48·55**	**482·36**	**236·74**
1	**Extraction**	**31·90**	**20·90**	**26·50**	**18·50**	**16·50**	**4·25**	**16·50**	**4·25**	**91·40**	**47·90**
	Plant and Manchinery ...	2·00	1·50	2·00	1·00	2·00	0·50	2·00	0·50	8·00	3·50
	Trucks and Jeeps ...	1·00	1·00	1·00	0·50	1·00	1·00	1·00	1·00	4·00	3·50
	Miscellaneous	1·00	...	1·00	...	1·00	...	1·00	...	4·00	...

	Two Launches ...	5·40	1·40	...	...	...	...	...	...	5·40	1·40
	Mechanical equipment ...	21·50	16·00	21·50	16·00	11·50	1·75	11·50	1·75	66·00	35·50
	Elephants	1·00	1·00	1·00	1·00	1·00	1·00	1·00	1·00	4·00	4·00
2	**Marketing**	**34·69**	**18·42**	**8·82**	**4·59**	**11·67**	**7·25**	**3·67**	**0·84**	**58·85**	**31·10**
	Buildings, Plant and Machinery.	9·10	...	1·74	...	1·37	...	0·69	...	12·81	...
	Cargo Boats	2·00	...	2·00	...	2·00	...	2·00	...	8·00	...
	Launches	9·05	9·05	...	...	5·50	5·50	...	...	14·55	14·55
	Gantry, Crane and Trucks ...	11·13	8·34	4·74	4·59	2·09	1·25	0·84	0·84	18·80	15·02
	Trucks	1·03	1·03	...	...	0·50	0·50	...	...	2·53	1·53
	Others	2·47	...	0·34	...	0·21	...	0·14	...	3·16	...
3	**Milling**	**40·31**	**18·35**	**69·02**	**35·71**	**120·30**	**60·22**	**102·48**	**43·46**	**332·11**	**157·74**
	Mills Extension ...	24·36	14·78	11·90	7·15	...	...	...	...	36·26	21·93
	Dimension Stock Mill ...	5·95	3·57	...	...	...	...	...	...	5·95	3·57
	New Mill	10·00	...	47·60	23·80	95·20	47·61	92·96	38·70	245·76	110·11
	Veneer and Plywood Factory	...	...	9·52	4·76	25·10	12·61	9·52	4·76	44·14	22·13

CHAPTER X

MINING

1. Minerals was the second major foreign exchange earner pre-war. It constituted about 8·5 percent of total foreign exchange earnings from trade, whereas in 1959-60 it fell to 4 percent. It should be pointed out also that although Burma was exporting some of her surplus petroleum products pre-war, she became a net importer after the war although there had been imports of such products in the past. Partly as a result of development efforts, the pattern of fuel consumption has undergone a considerable change. The rate of growth in the consumption of petroleum products for the past few years has considerably exceeded the rate of growth in income. Unless petroleum is found in sufficient quantity in the Union, very soon she will have to import petroleum products in such quantity that it may be economical to import crude and refine it in the country to meet her requirements.

2. Any programme for the mining sector, therefore, must have these two post-war developments in view. Production of metal and ore must be expanded to pre-war level and beyond to earn the much needed foreign exchange. At the same time, measures to find new sources of fuel must be adopted and implemented immediately, if the Union's foreign exchange reserves are not to be frittered away on the fuel account. Since the Union supposedly has oil, coal and natural gas reserves, efforts consistent with her financial resources and priorities of work should not be spared to develop these resources in order to avoid or reduce import of fuels from abroad. In fact, these efforts will proceed in accordance with a co-ordinated National Fuel Policy.

Oil

3. As indicated earlier the Union has had to import petroleum products to meet her requirements after the war, although the volume of imports has been steadily diminishing all these years. At one point of time she was even almost self-sufficient in petroleum products except for special items such as aviation spirit. Nevertheless, the rapidly increasing demand for petroleum products and the failure yet to find new oil wells, has again necessitated the import of these products. Such import has also been necessitated by another reason namely that the demand for refined oil products has already reached or exceeded the refinery capacity in the country. The Union Government has already given its approval to the Joint Venture BOC (1954) Ltd., to carry out its plan to expand the refining capacity at Syriam. The new extension which will be completed in 1963-64 will have a daily refining capacity of 500,000 gallons.

4. With the above shortage of crude oil in view, the authorities concerned have approved the BOC's programmes within the Plan period to spend at the rate of K 250 lakhs per annum to continue exploration. The Union Government has recently issued prospecting licence to the General Exploration Co. of California to explore an area of some 10,000 square miles.

Coal

5. Although the Union is not a coal-rich country by certain standards, it has a number of outcrops spread all over the country. In 1954 the Union Government made a major attempt to exploit coal resources near Kalewa which investigations indicated to be the most promising. It has a total reserve of 21 million tons of which nearly 2 million tons is proved reserves. The " Kalewa Coal Project " was accordingly drawn up in 1955 for implementation. The progress so far achieved has not been encouraging due to the quality of the

coal which is liable to spontaneous combustion in storage and degradation to finer sizes in handling. However, the newly discovered "Wahtein" coal has been successfully tested by the Burma Railways. The MRDC, therefore during the Plan period, proposes to continue the development of new coal seams, in addition to expanding normal production from 25 tons per day in 1960-61 to 400 tons in 1964-65. Necessary co-ordination with transport agencies will also be undertaken to solve in time the problem of transporting large-scale production of coal, when forthcoming.

Natural Gas

6. BOC Joint Venture Ltd., while drilling for oil has found substanital gas reserves at Chauk oilfields. The estimated availability is about 10 million cubic feet per day for about 25 to 30 years. Proposition to set up an ammonia plant using the natural gas is being considered. Possibility of supplying the remaining gas to the cement mills at Thayetmyo is also being explored. As an alternative source K 240 lakhs is provided under Burma Geological Department's budget for the exploration of natural gas in the vicinity of the cement mills.

Metals and Ores

7. As has been stated earlier, the production as well as export of metals and ores has been far below that of pre-war. In order to raise production of some metals and ores the Mineral Resources Development Corporation has plans to carry out systematic underground exploration and development works with modern methods and equipment in addition to the present method of surface mining. The Corporation is negotiating with interested firms to exploit the iron ore resources in Maputeh Island in Mergui Archipelago. The estimated reserve is about one million ton of ores with 60 percent iron content. A similar joint venture with a foreign firm is also under consideration to explore and extract copper in Monywa district. In addition, the Anglo-Burma Tin Company (1956) Ltd., has plans to replace its old pipe lines and concentration plant with a view to increasing production by 40 per cent. In order to finance this development project, the Joint Venture Company's proposal to raise capital has been accepted by the Union Government. This financing arrangement will make the Union Government a major partner of the business. With regard to the Burma Corporation (1951) Ltd., a request was made to the UN Special Fund for a survey of the possibility of exploiting economically the low and medium grade ores, installation of a modern lead-zinc smelter, recovery of zinc from lead slags containing about 19 per cent zinc oxide and of measures to modernize or rationalize existing machinery and facilities at the Bawdwin mines. The request has been granted. The UN Special Fund has already allocated $ 5·9 lakhs as its contribution to two-thirds of the total project costs.

8. Plans are also being approved for implementation of a programme by the Mines and Explosives Department for giving technical assistance to private mine owners in their endeavour to exploit the mineral resources with efficiency and speed. Two practical training centres for miners will be opened for the benefit of the mining community. These centres are meant for substantiating the technical advice given by practical demonstration. One of these centres will be in Tavoy, the mining area and the other will be in an appropriate place either in the States or Burma Proper.

9. Photo-interpretation and regional mapping work will be continued to complete the compilation of a geological map of the whole country. An intensive survey for tin and wolfram not only presently known and working areas but also in entirely new and economically workable areas will be undertaking. In addition an inventory of mineral resources

of all mines will be prepared and intensive studies will be carried out in regions where geological mapping has picked out likely areas of workable mineral concentration. Raw materials surveys and other urgent investigations will be conducted. A survey of underground water resources in the dry zone will also be carried out by the Geological Department. A new office building complete with laboratories and testing facilities will be constructed for the Burma Geological Department to facilitate work in this field. Funds for this building are provided under NHB budget.

10. With a view to ascertaining the possibility of establishing a steel industry in the Union a team of experts from Krupp Co. has been invited with the help of the West German Government to make a survey of the quality and quantity of the two major raw materials namely iron and coal. This team will make a thorough study of iron deposits at Taunggyi and Maymyo areas and coal at Kalewa. Iron ore deposits at Maputeh and Khokyun islands in Mergui Archipelago will also be examined. On receipt of a favourable report from this team, the Union Government will consider the construction of a smelter in the Long Term Plan.

MINING

TABLE 87.—*Capital Expenditure Under Four-Year Plan* (1961-62 *to* 1964-65)

(In K lakhs)

Sr.No. (1)	Name of Agency or Projects (2)	1961-62 Total (3)	1961-62 F.E. (4)	1962-63 Total (5)	1962-63 F.E. (6)	1963-64 Total (7)	1963-64 F.E. (8)	1964-65 Total (9)	1964-65 F.E. (10)	Total Total (11)	Total F.E. (12)
A	M. R. D. C.	12·65	12·65	11·67	11·67	10·40	10·40	6·00	6·00	40·72	40·72
B	Burma Geological Department	62·77	32·77	61·45	41·45	31·45	31·45	61·45	31·45	247·12	127·12
C	Anglo-Burma Tin Co. (1956) Ltd.	5·00	5·00	...	...	...	...	...	...	5·00	5·00
D	Burma Oil Co. (1954) Ltd.										
	(*a*) Construction of a new refinery at Syriam.	85·00	85·00	...	...	...	...	...	...	85·00	85·00
E	Mines and Explosives Department.	5·78	3·78	1·17	0·67	0·90	0·40	1·75	1·75	9·60	6·60
	Total ...	171·20	139·20	74·29	43·79	72·75	42·25	69·20	39·20	387·44	264·44
A	**Mineral Resources Development Corporation**	12·65	12·65	11·67	11·67	10·40	10·40	6·00	6·00	40·72	40·72
1	Yadanabon Mines ...	2·00	2·00	1·00	1·00	1·00	1·00	1·00	1·00	5·00	5·00
2	Kalewa Coal	10·65	10·65	10·67	10·67	9·40	9·40	5·00	5·00	35·72	35·72
3	Maputeh Iron Ore J. V. Project	...	...	...	...	...	...	...	...	...	...
B	**Burma Geological Department**	62·77	32·77	61·45	31·45	61·45	31·45	61·45	31·45	247·12	127·12
1	Vehicles	2·52	2·52	1·20	1·20	1·20	1·20	1·20	1·20	6·12	6·12
2	Equipment (Reparation) ...	0·25	0·25	0·25	0·25	0·25	0·25	0·25	0·25	1·00	1·00
3	Gas Exploration	60·00	30·00	60·00	30·00	60·00	30·00	60·00	30·00	240·00	120·00

C	**Anglo-Burma Tin Co. (1956) Ltd.**	5·00	5·00	...	...	...	...	...	...	5·00	5·00
D	**Burma Oil Co. (1954) Ltd.** ...	85·00	85·00	...	...	...	...	...	...	85·00	85·00
	(*a*) Construction of a new refinery at Syriam.	85·00	85·00	...	...	...	...	...	...	85·00	85·00
E	**Mines and Explosives Department.**	5·78	3·78	1·17	0·67	0·90	0·40	1·75	1·75	9·60	6·60
1	Ore Testing Laboratory ...	0·50	0·50	0·15	0.15	0·10	0·10	0·54	0·54	1·29	1·29
2	Mine Field Survey ...	0·25	0·25	0·10	0·10	0·10	0·10	0·67	0·67	1·12	1·12
3	Mines Safety Laboratory ...	0·10	0·10	0·10	0·10	0·10	0·10	0·20	0·20	0·50	0·50
4	Chemical Laboratory ...	0·10	0·10	0·10	0·10	0·10	0·10	0·14	0·14	0·44	0·44
5	Purchase of Motor Vehicles ...	0·33	0·33	0·22	0·22	...	...	...	...	0·55	0·55
6	Establishment of Laboratories Building.	2·00	...	0·50	...	0·50	...	...	...	3·00	...
7	Provision of training facilities for indigenous mining industry.	2·50	2·50	...	...	...	...	0.20	0.20	2·70	2·70

CHAPTER XI

INDUSTRY

1. Even before Independence and as early as 1947, it was felt that if independent Union of Burma is to have a sound and a relatively stable economy, she must not only rehabilitate her land and reorganize her land system but also carry through a moderate industrial programme. The Planners in the Sorrento Villa, therefore, enumerated a number of industries to be established in the country. All of these industries again reappeared in the Eight-Year Plan drawn up in 1952. Since then most of these industries have been implemented. Except for a Paper Factory, all the industries included in the Two-Year Plan have been set up within the public sector.

2. During the period of the current plan, however, relative emphasis will be placed on consolidation and rationalization of the factories and industries already established. In order not to hinder the growth of the nation's industrial potentialities, all possible help and facilities will be given to private industrialists in their endeavour to promote domestic industries. In addition, to attract private foreign capital the Investment Act has been passed and due publicity accorded to the Act at home as well as abroad. Arrangements have been made to provide facilities of machinery purchase on a deferred payment basis. A new factory area will be developed and sites prepared to relieve the prospective investors the undue burden of this work. To help solve the problem of industrial finance, an Industrial Development Bank is to be opened soon. The Union of Burma Applied Research Institute has been carrying on some industrial applied research, the results of which are being divulged for the benefit of the industrial community. Funds are being provided for the UBARI to continue providing such technical assistance to the industrialists. Technical help is also being offered by the Directorate of Industries in this field. Plans for providing larger imports of industrial raw materials have been approved to meet the expanding requirements of a growing private industrial sector.

Cement Mills

3. Production at the old cement mill has been recovering slowly for the past two years due to shortage of natural gas being supplemented by the use of furnace oil which is more expensive. Gas exploration is being carried out to get enough gas for the operation of the mills and bring down cost of production. To meet the transport as well as other requirements of increased production in the existing mill a mechanical loading system, a gypsum grinding plant, a cement grinding mill will be installed. Silos for a second quality cement as well as godowns for paper sacks, gypsum, etc., will be constructed. The new cement mill with a capacity of 120,000 tons now being built adjacent to the old mill is to be completed in 1961-62. This will bring up the total national capacity to 180,000 tons a year.

Jute Mill

4. Gunny bags requirement at the end of this Plan will be over 40 million bags on rice export account alone. So far the mill has been able to supply only 14 million bags running two shifts although the rated capacity on a three-shift basis is 36 million bags. In order to improve operational efficiency some essential machine tools such as hobbling machine, compressor for cleaning the high speed revolving parts, baling presses, etc., have been allowed. To effect economy plants such as waste recovery and briquetting plant, a road weigh-bridge and machinery for handling waste will also be installed.

Engineering Industry Project

5. Financial allocations are made to expand foundry facilities and plants expansions to enable this department to service the whole of IDC complex with spare parts, and to expand the operation covering agricultural implements including pumps, sanitary goods and wares and services required by not only various Government departments but also private industrialists. The Government is considering whether continued Government participation in manufactures as are being done by the private sector such as kerosene stoves is suitable or not.

Sugar Mills

6. The present national annual requirement of sugar is estimated at about 67,000 tons. The three existing mills together supply, about 39,000 tons leaving a deficit of 28,000 tons which is met by imports. Assuming a 3 percent rate of increase in consumption the requirement by 1964-65, will be some 77,000 tons. Since the 3 Government-owned mills can supply together in ideal working condition about 45,000 tons, there will be a deficit of some 32,000 tons by then. The completion and successful running of the private Sahmaw mill will still leave about 22,,000 tons deficit unmatched. That means two additional sugar mills will have to be constructed, one of which will be completed during the Plan period, if the country is to produce its own sugar. And there is plenty of land that can be beneficially put under sugarcane.

Steel Mill

7. In the case of the Steel Mill, some market oriented changes will be made. Production capacities regarding round bars and sheet bars will be increased by 60 percent and 30 percent respectively. Plans have been made to re-open the sheet mill which was closed for a considerable time and to treble wire products operation.

Textile Mills

8. The textile mills at Thamaing have together 40,000 spindles and 390 looms and are at present producing 8·5 million pounds of yarn and 3·5 million yards of cloth. Although there is substantial room for increased production through efficiency drive, compared to the national requirements they are quite modest. The average imports of yarn and textile during the past 3 years are 37 million lbs. and 114 million sq. yds. respectively. At this rate of consumption per capita, the national requirements at the end of 16 years will be 125 million lbs. of yarn or 500 million yards of cloth. That means, to be self-sufficient in major national requirement of textiles, the number of spindles installed in the country must be about 350,000 and the number of looms 40,000. It should be noted that these requirements are based on a constant per capita rate of consumption. With this objective in view, it is planned to install during the Plan period not less than 100,000 spindles and 6,000 looms. Of this the public sector will take up about 60,000 spindles and 3,000 looms. Funds have been provided in the IDC's plan for implementation of this project. In order to meet the cotton requirements of these mills, the Government will encourage the cultivation of long staple cotton as well as Mahlaing 5 and other short staple cotton through the Agricultural and Rural Development Corporation.

Paper Mill

9. Paper requirements in Union of Burma are at present totally met by imports which averaged about 20,000 tons annually for the last 3 years. With the spread of education,

income and industries, the requirements of paper *per capita* is bound to increase quite rapidly in the immediate future. With this urgent requirement in mind, Government has approved the setting up of pulp and paper industry in Burma. However, since the pulp mill whose economic size is rather large for the private industrial sector in Burma, Government will set up a 60-ton day pulp mill so that the private sector may build small paper mills to suit their finances as well as the specific market they are catering for.

Burma Pharmaceutical Industry

10. The objective of this industry is to meet the basic pharmaceutical and industrial alcohol requirements of the country and to distribute hygienic liquor throughout the country. Provisions have been made to procure and install additional machineries and equipments for the pharmaceutical section and construction of a new distillery with a capacity of over 1 million gallon a year. This distillery will use up substantial portion of the molasses now being produced by the sugar mills as a by-product. So far only a portion of these molasses has been utilized by State Brewery and Distillery, and the rest going waste due to lack of facilities for bulk transport for export. It is intended that surplus alcohol will be exported to neighbouring overseas market. It is also planned to export the BPI's pharmaceutical products to the South-East Asia markets.

Tile and Brick Factory

11. The demand for brick of this factory is such that it is long over due to expand the brick operation. Provisions are, therefore, made in the current plan to construct a new mill with a capacity of 9·5 million bricks per year. The proposed mill will come into operation in 1964-65. Meanwhile in order to increase production extension works to take advantage of already existing facilities will be undertaken. This extension work will increase production by 12 percent. With the attainment of a sound footing in the brick operation, the activities of the factory will branch out to various clay products. Funds have been provided to achieve this programme during the coming four years.

Tourist Industry

12. In many countries of the world including quite many from this region, tourist industry has become very prominent in terms of foreign exchange earning capacities and potentialities. In order not to lag behind and also to take advantage of the flourishing tourism and existence of ancient as well as scenic places of Burma, a Tourist Bureau will be established. One of the vital prerequisites of a healthy tourist trade is the existence of appropriate hotel accommodations for the tourists. Arrangements are being made for the efficient operation of the hotels. This arrangement is designed in such a way as to not only ensure a reasonable occupancy of the hotel but also to generate a decent amount of tourist traffic.

TABLE 88.—*Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65)

(In K Lakhs)

Sr. No. (1)	Name of Agency or Projects (2)	1961-62 Total (3)	1961-62 F.E. (4)	1962-63 Total (5)	1962-63 F.E. (6)	1963-64 Total (7)	1963-64 F.E. (8)	1964-65 Total (9)	1964-65 F.E. (10)	Total Total (11)	Total F.E. (12)
	Industrial Devolopment Corporation.	255·26	177·94	665·32	546·72	804·27	618·51	407·71	318·94	2,132·56	1,662·11
	Union of Burma Applied Research Institute.	13·00	8·00	10·00	5·50	10·00	5·50	3·00	2·25	36·00	21·25
	Tile and Brick Factory ...	11·00	8·00	17·10	14·50	6·20	1·80	5·00	2·00	39·30	26·30
	Paper Factory and Chemical Industries.	70·00	20·00	195·00	150·00	130·00	100·00	...	...	395·00	270·00
	Promotion of Tourist Trade ...	21·00	...	15·00	...	17·00	...	17.00	...	70·00	...
	BPI	47·85	23·70	41·60	20·14	12·24	8·78	23·03	8·76	124·71	61·38
	Total ...	418·11	237·64	944·02	736·86	979·71	734·59	455·74	331·95	2,797·57	2,041·04
A	**Industrial Development Corporation.**	**255·26**	**177·94**	**665·32**	**546·72**	**804·27**	**618·51**	**407·71**	**318·94**	**2,132·56**	**1,662·11**
1	**Cement Mill (Existing)** ...	**4·45**	**2·65**	**17·96**	**16·89**	**10·05**	**6·80**	...	...	**32·46**	**26·34**
	Machineries and Equipment ...	1·25	1·00	15·89	15·89	5·80	5·80	...	...	22·94	12·69
	Buildings and Construction ...	2·10	1·00	2·07	1·00	4·25	1·00	...	...	8·42	3·00
	Others	1·10	0·65	...	...	...	...	...	...	1·10	0·65
2	**Cement Mill (Extension)** ...	**55·06**	**29·07**	...	...	...	...	...	...	**55·06**	**29·07**
	Machineries and Equipment ...	17·82	17·57	...	...	...	...	...	...	17·82	17·57
	Buildings and Construction ...	15·75	0·25	...	...	...	...	...	...	15·75	0·25
	Others	21·49	11·25	...	...	...	...	...	...	21·49	11·25

3	**Jute Mill**	11·22	4·45	8·45	6·05	7·21	5·21	6·81	3·36	33·69	19·07
	Machineries and Equipment ...	4·45	4·45	6·85	5·55	5·61	4·61	4·01	3·01	20·92	17·62
	Buildings and Construction ...	6·77	...	1·00	0·50	1·00	0·60	2·20	0·25	10·97	1·35
	Others	...	...	0·60	...	0·60	...	0·60	0·10	1·80	0·10
4	**Engineering Industry Project**	5·14	2·20	5·00	4·00	...	...	...	...	10·14	6·20
	Machineries and Equipment ...	1·30	1·20	5·00	4·00	...	...	...	...	6·30	5·20
	Buildings and Construction ...	3·84	1·00	...	...	...	...	...	...	3·84	1·00
	Others	...	...	...	...	...	...	...	...	...	...
5	**Pyinmana Sugar Mill** ...	3·63	2·50	9·00	2·00	10·50	2·00	7·00	1·50	30·13	8·00
	Machineries and Equipment ...	1·00	1·00	3·00	2·00	3·50	...	2·00	1·50	9·50	4·50
	Buildings and Construction ...	1·63	0·50	2·50	...	3·00	...	2·00	...	9·13	0·50
	Others	1·00	1·00	3·50	...	4·00	2·00	3·00	...	11·50	3·00
6	**Zeyawaddy Sugar Mill** ...	7·40	6·00	2·15	1·00	2·40	1·00	6·40	1·80	18·35	9·80
	Machineries and Equipment ...	6·00	6·00	1·00	0·80	1·00	0·80	1·00	0·80	9·00	8·40
	Buildings and Construction ...	1·20	...	0·95	0·20	1·20	0·20	5·00	0·80	8·35	1·20
	Others	0·20	...	0·20	...	0·20	...	0·40	0·20	1·00	0·20
7	**Namti Sugar Mill**	3·45	2·00	2·50	0·80	2·50	0·80	2·50	0·73	10·95	4·33
	Machineries and Equipment ...	0·50	0·50	1·00	0·80	1·00	0·80	1·00	0·73	3·50	2·83
	Buildings and Construction ...	1·95	1·50	0·50	...	0·50	...	0·50	...	3·45	1·50
	Others	1·00	...	1·00	...	1·00	...	1·00	...	4·00	...
8	**Steel Mill**	3·87	2·45	1·13	0·50	2·06	...	2·10	...	9·16	2·95
	Machineries and Equipment ...	2·45	2·45	...	...	...	...	...	...	2·45	2·45
	Buildings and Construction ...	1·37	...	1·03	0·50	1·96	...	2·00	...	6·36	0·50
	Others	0·05	...	0·10	...	0·10	...	0·10	...	0·35	...

TABLE 88.—*Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65)—concld.

(In K Lakhs)

Sr. No. (1)	Name of Agency or Projects (2)	1961-62 Total (3)	1961-62 F.E. (4)	1962-63 Total (5)	1962-63 F.E. (6)	1963-64 Total (7)	1963-64 F.E. (8)	1964-65 Total (9)	1964-65 F.E. (10)	Total Total (11)	Total F.E. (12)
9	**Pottery Project**	**4·36**	**3·27**	**2·00**	**1·50**	...	...	...	...	**6·36**	**4·77**
	Machineries and Equipment ...	3·27	3·27	2·00	1·50	...	...	...	...	5·27	4·77
	Buildings and Construction ...	1·09	...	...	...	...	...	...	...	1·09	...
	Others	...	...	...	...	...	...	...	...	...	...
10	**Silk Project**	**0·12**	**0·10**	...	...	...	...	...	...	**0·12**	**0·10**
	Machineries and Equipment ...	[illegible]	0·10	...	...	...	...	...	...	0·12	0·10
11	**State Brewery and Distillery** ...	**3·00**	**3·00**	...	...	...	...	...	...	**3·00**	**3·00**
	Machineries and Equipment ...	2·50	2·50	...	...	...	...	...	...	2·50	2·50
	Buildings and Construction ...	0·50	0·50	...	...	...	...	...	...	0·50	0·50
	Others	...	...	...	...	...	...	...	...	...	...
12	**Textile Mills (Nos. 1 and 2)** ...	**5·04**	**4·25**	**7·13**	**5·98**	**7·55**	**6·70**	**6·10**	**4·05**	**25·82**	**20·98**
	Machineries and Equipment ...	4·10	4·10	5·23	5·23	5·95	5·95	3·00	3·00	18·28	18·28
	Buildings and Construction ...	0·84	0·10	1·30	0·20	1·00	0·20	2·50	0·50	5·64	1·00
	Others	0·10	0·05	0·60	0·55	0·60	0·55	0·60	0·55	1·90	1·70
13	**Two New Sugar Mills** ...	...	...	**100·00**	**80·00**	**150·00**	**112·00**	**50·00**	**48·00**	**300·00**	**240·00**
14	Development of Industry Site * ...	...	...	...	...	...	...	...	...	...	...
15	Hire Purchase Loans † ...	...	...	...	...	...	...	...	...	...	...
16	**Spinning Mill (60,000 Spindles)**	**49·00**	**41·00**	**148·00**	**143·00**	**196·00**	**154·00**	**107·50**	**81·50**	**500·50**	**419·50**
	Machineries and Equipment ...	30·00	30·00	90·00	90·00	120·00	120·00	70·00	70·00	310·00	310·00
	Buildings and Services ...	18·00	10·00	55·00	50·00	72·00	30·00	35·50	10·00	180·50	100·00
	Others	1·00	1·00	3·00	3·00	4·00	4·00	2·00	1·50	10·00	9·50

17	**Weaving Factory (3 Factories with 1,000 Looms each).**	**54·00**	**45·00**	**162·00**	**135·00**	**216·00**	**180·00**	**114·30**	**93·00**	**546·30**	**453·00**
	Machineries and Equipment ...	30·00	30·00	90·00	90·00	120·00	120·00	60·00	60·00	300·00	300·00
	Buildings and Services ...	21·00	12·00	63·00	36·00	84·00	48·00	42·30	24·00	210·30	120·00
	Others	3·00	3·00	9·00	9·00	12·00	12·00	12·00	9·00	36·00	33·00
18	**IDC Head Office including Engineering Works.**	**0·52**	...	...	...	...	...	...	...	**0·52**	...
19	**Fertilizer Plant ... ...**	**45·00**	**30·00**	**200·00**	**150·00**	**200·00**	**150·00**	**105·00**	**85·00**	**550·00**	**415·00**
	Miscellaneous Industries ...	**162·85**	**59·70**	**278·70**	**190·14**	**175·44**	**116·08**	**48·02**	**13·01**	**665·01**	**378·93**
B	**Union of Burma Applied Research Institute**	**13·00**	**8·00**	**10·00**	**5·50**	**10·00**	**5·50**	**3·00**	**2·25**	**36·00**	**21·25**
	Machineries and Equipment ...	5·00	4·00	2·00	1·50	2·00	1·50	3·00	2·25	12·00	9·25
	Buildings and Construction ...	8·00	4·00	8·00	4·00	8·00	4·00	...	...	24·00	12·00
	Others	...	...	...	...	...	...	...	...	...	...
C	**Tile and Brick Factory ...**	**11·00**	**8·00**	**17·10**	**14·50**	**6·20**	**1·80**	**5·00**	**2·00**	**39·30**	**26·30**
	Machineries and Equipment ...	8·00	7·00	16·00	14·00	...	...	1·00	1·00	25·00	22·00
	Buildings and Construction ...	3·00	1·00	1·00	0·50	5·00	1·00	4·00	1·00	13·00	3·50
	Others	...	...	0·10	...	1·20	0·80	...	...	1·30	0·80
D	**Paper Factory ... ...**	**70·00**	**20·00**	**195·00**	**150·00**	**130·00**	**100·00**	...	...	**395·00**	**270·00**
E	**Promotion of Tourist Trade**	**21·00**	...	**15·00**	...	**17·00**	...	**17·00**	...	**70·00**	...
	Resaturants	3·00	...	9·00	...	9·00	...	9·00	...	30·00	...
	Hotels	18·00	...	6·00	...	8·00	...	8·00	...	40·00	...
F	**Burma Pharmaceutical Industry.**	**47·85**	**23·70**	**41·60**	**20·14**	**12·24**	**8·78**	**23·02**	**8·76**	**124·71**	**61·38**
	Machineries and Equipment ...	22·85	17·00	26·60	20·00	10·00	8·00	4·56	4·13	64·01	49·13
	Buildings and Construction ...	25·00	6·70	15·00	0·14	0·85	0·17	6·95	0·25	47·80	7·26
	Others	...	...	...	...	1·39	0·61	11·51	4·38	12·90	4·99

* Under National Housing Board.

† Under Industrial Bank (K 120·00 lakhs).

CHAPTER XII

ELECTRICITY

1. The growth and development of an economy is in one way or another indicated by the development and consumption of electric power. Moreover the growth rate in the consumption of power can be cited not only as an index of development but also of welfare. Before the war there were less than 100 towns with electricity supply. Of these only 13 towns enjoyed a 24-hour supply. The total power generation for the country was only 48 million kWh.

2. During the War almost all the electric supply systems and generation units were either dismantled or destroyed. As a result the beginning of 1947 saw only 19 towns having electricity supply with a total installed capacity of only about 10,000 kW. The development during the following five years under the Electricity Supply Department in the Ministry of Industry got the Union only as far as her pre-war position in terms of installed capacity and about one-third ahead in terms of power generated. It was, therefore, decided to set up a special agency to develop the generating capacity and promote uses of electricity throughout the country. The Electricity Supply Act of 1948 was passed, and the Electricity Supply Board was formed on 1st October 1951.

3. The implementation of the Diesel Electrification Scheme approved by the Union Government in early 1953, showed substantial results in the very first year. By the end of fiscal year 1958-59, a total installed capacity of 75,000 kW was added to the nation's power grid. The completion of the Baluchaung Hydro-Electric Project and two steam turbines in Mandalay, further enhanced the total installed capacity to 190,700 kW in 1959-60. The total number of towns and villages electrified increased manifold within the span of these seven years. The total number of towns electrified is 320 as against less than one hundred pre-war. And more than 360 villages which never had electricity pre-war have been electrified by the beginning of 1960.

TABLE 89.—*The Progress of Electrification in the Union of Burma*

Year	Number of towns and villages electrified		Total installed capacity. kW	Total units generated in million of kWh
	Towns	Villages		
1939	100	...	33,800	47·65
1947-48	19	...	9,710	9·70
1948-49	20	...	9,922	19·45
1949-50	22	...	10,128	23·56
1950-51	28	...	20,660	32·24
1951-52	36	...	29,637	52·49
1952-53	41	...	30,015	63·80
1953-54	90	2	41,417	72·68
1954-55	183	38	49,000	89·89
1955-56	240	145	51,294	108·16
1956-57	284	249	76,883	140·06
1957-58	323	361	92,569	178·61
1958-59	320	371	105,568	207·19
1959-60	320	364	190,668	235·50

4. Power consumption increased by almost fivefold compared to pre-war. The average annual growth rate of consumption for the recent few years is nearly 20 per cent and it seems that this growth rate may continue. That means the demand for electricity will double every four years. Power generation doubled between 1951-52 and 1955-56 and again more than doubled between 1955-56 and 1959-60. And yet the number of applications for power supply and extension is still on the increase. It is therefore necessary to prepare for what is likely to happen during the coming four years.

5. With this demand development in view, assuming an average increase of 16 per cent in the demand for power, the three departments of ESB, namely the Hydel Department, the Electrical and Mechanical Department and the Rangoon Electricity Supply Department have drawn up their plan for the next four years.

Hydel Department

6. In order to meet the demand for electric power the Hydel Department will continue with the remaining works of the First Stage Development of the Baluchaung Hydro-Electric Project. The present installed capacity is 84,000 kW (28,000 kW—3 sets). Since April 1960, power from the Baluchaung Project has fed 44 towns and 157 villages in the Hydro Grid Area, such as Rangoon, Pegu, Tharrawaddy, Prome and Loikaw districts. About 80 per cent of the power consumption in the RES area is sent out from the Baluchaung Power Station. Moreover, the Hydel Department under the Second Four-Year Plan, will complete the Toungoo Sub-station for initial installation of 33,000 kVA of Southern Transmission System and the 132 kV Northern Transmission System with Sub-stations at Kalaw, Thazi and Mandalay by about the end of 1962-63. A Power Line Carrier Telephone System will also be installed for the Northern Transmission System.

7. Power supply in the Hydro Grid Area is now met by combined generation of hydel power plant at Lawpita and diesel or thermal Plants at Rangoon (RES power) as a combined system. Based on previous experience, it is anticipated that by 1965 the demand for power in the Hydro Grid Area will exceed the total power available from the combined Baluchaung and Rangoon Electric Supply power supply. Thus, it is likely that power shortage will be felt towards the end of 1965 which can be aggravated by mishap which might occur, such as major breakdown in the generating sets or acute shortage of water during dry weather period.

8. Accordingly, the Union Government has approved the Electricity Supply Board's proposal to implement the Second Stage Development of Baluchaung Hydro-Electric Project which calls for construction of Mobye Dam to enable storage of the water flowing all the year round in the Baluchaung and installation of additional 3 generating units each of 28,000 kW capacity, inside the present No. 2 Power Station. In addition, it will be necessary to carry out extension works at the Rangoon Primary Sub-station near Hlawga and Improvement Works to existing 230 kV Southern Transmission Line. It should be noted here that the unit cost (cost per kilowatt) of additional installed capacity of the Second Stage Baluchaung Project is lower than the unit cost in the case of a diesel set, due to the fact that most of the work has been done in the First Stage.

9. There is now power shortage in the Prome District due to the absence of a direct High Tension Transmission Line from Rangoon to Prome. Moreover, the existing 33 kV lines are for local transmission only and cannot be used for transmitting hydro-electric power with much success. Therefore, the Hydel Department will start the Toungoo-Prome 132 kV

Western Transmission Line (Direct High Tensions Transmission Line) and Prome Sub-station for initial installation of 12,000 kVA in the year 1961-62. To promote industries in the Southern Shan States, such as weaving, canning and mining, 66 kV Kalaw-Taunggyi Line and Taunggyi Sub-station for initial installation of 6,000 kVA are also scheduled to begin in 1961-62. General Hydro-electric Survey Programme also will be started in 1961-62. Under this programme, the Hydel Department has made provisions for reconnaissance survey of selected water power sites and collection of basic hydrological data which are essential for making plans for hydro-electric development in the Union.

Electrical and Mechanical Department

10. With the commissioning of Baluchaung Hydro-Electric Supply, Prome area, Pegu area and Rangoon area have been served with hydro-power. By about the end of 1962-63 the Northern Transmission System will be completed and Mandalay, Kalaw and Meiktila areas will be served from the Baluchaung system. Until Baluchaung power is stabilized some of the generators installed in these areas will have to be kept as a standby. The rest can be reallocated to meet power requirements outside the grid.

11. With the completion of the Northern Transmission System and sub-stations distribution systems in the above-mentioned localities will have to be expanded and improved. It will also become necessary to set up an instrument testing laboratory and a central workshop at Mandalay to serve the Northern Transmission System. As the use of electricity becomes more widespread it will also be advantageous to have a Wooden-pole Treating Plant.

Rangoon Electricity Supply

12. As has been mentioned earlier, the growth rate of electricity consumption has been more than 20 percent annually. And the number of applicants for power connection has been continuously on the increase. However, due to lack of funds, the distribution system has not kept up with the increase in power load in the recent past. Therefore for the Plan period funds have been liberally allocated to carry out the improvement of old sub-stations and cables and construction of new ones. Improvement and extension of (6·6) kV and low tension distribution system has also been approved. Construction of a new hydel in-take will be carried out towards the end of the Plan period to meet the expanding demand for power. To facilitate efficient operations of the department, a new office building has been approved and adequate transport facilities provided.

ELECTRICITY

TABLE 90.—*Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65) (In K lakhs)

Sr. No. (1)	Name of Agency or Projects (2)	1961-62		1962-63		1963-64		1964-65		Total	
		Total (3)	F. E. (4)	Total (5)	F. E. (6)	Total (7)	F. E. (8)	Total (9)	F. E. (10)	Total (11)	F. E. (12)
	ELECTRICITY SUPPLY BOARD										
	(*a*) Hydel Department ...	250·39	135·40	367·76	284·09	284·36	189·57	305·74	203·37	1208·25	812·43
	(*b*) Electrical and Mechanical Department.	84·50	50·12	81·86	56·51	68·77	46·89	91·99	55·28	327·12	208·80
	(*c*) Rangoon Electric Supply ...	128·96	76·59	114·14	46·06	121·89	63·41	137·48	77·99	502·47	264·05
	TOTAL ...	463·85	262·11	563·76	386·66	475·02	299·87	535·21	336·64	2037·84	1285·28
	(a) Hydel Department ...	**250·39**	**135·40**	**367·76**	**284·09**	**284·36**	**189·57**	**305·74**	**203·37**	**1208·25**	**812·43**
I	First Stage Development of Baluchaung Hydro-Electric Project (Remaining Works).	207·16	114·09	114·04	99·94	13·80	10·77	...	...	335·00	224·80
II	Proposed Second Stage Development of Baluchaung Project for regulating stream flow by Mobye Reservoir and installation of additional 84,000 kW Plant.	20·30	9·30	187·50	137·50	178·70	125·20	278·50	187·00	665·00	459·00
III	Proposed construction of Toungoo-Prome 132 kV Transmission line and Prome Sub-station for initial installation of 12,000 kW.	13·50	5·50	33·00	28·00	87·00	52·00	26·52	16·30	160·02	101·80
IV	Proposed construction of Kalaw-Taunggyi 66 kV Transmission line and Taunggyi Sub-station for initial installation of 6,000 kW.	8·47	5·97	32·10	18·11	4·24	1·53	...	...	44·81	25·61

V	Proposed General Hydro-Electric Survey Programme.	0·96	0·54	1·12	0·54	0·62	0·07	0·72	0·07	3·42	1·22
	(b) Electrical and Mechanical Department.	**84·50**	**50·12**	**81·86**	**56·51**	**68·77**	**46·89**	**91·99**	**55·28**	**327·12**	**208·80**
1	Land and compound ...	15·25	3.50	7·00	0·90	7·00	0·45	23·00	6·45	52·25	11·30
2	Generation	3·65	2·12	6·75	5·00	6·75	5·00	12·20	8·00	29·35	20·12
3	Transmission	9·50	4·50	4·16	2·96	4·10	2·90	9·54	7·45	27·30	17·81
4	Distribution	45·00	33·00	48·05	35·15	40·42	29·94	40·95	28·98	174·42	127·07
5	Workshop (including plant) and measuring instrument (including laboratory).	7·10	5·50	6·90	5·50	2·00	1·60	3·00	2·40	19·00	15·00
6	Nationalization and compensation	2·00	...	0·50	...	0·30	...	0·30	...	3·10	...
7	Carried over Committment ...	2·00	1·50	8·50	7·00	8·20	7·00	3·00	2·00	21·70	17·50
	(c) Rangoon Electric Supply	**128·96**	**76·59**	**114·14**	**46·06**	**121·89**	**63·41**	**137·48**	**77·99**	**502·47**	**264·05**
1	33 kV cables	18·45	17·17	5·40	5·10	5·30	4·97	13·00	12·50	42·15	39·74
2	Primary Distribution Sub-station	27·65	23·35	4·00	2·90	13·85	11·92	5·70	5·00	51·20	43·17
3	66 kV and LT Distribution System including street lighting.	55·86	27·85	51·48	23·66	51·98	24·12	62·45	34·59	221·77	110·22
4	New Office Building ...	5·00	...	25·00	5·00	25·00	5·00	25·00	5·00	80·00	15·00
5	Other Buildings	5·00	0·50	4·00	0·50	4·00	0·50	5·00	1·00	18·00	2·50
6	Transport, Power Station Workshop and accounting equipment.	10·50	7·72	12·00	8·90	12·00	8·90	14·00	10·90	48·50	36·42
7	Hydel Interconnection ...	...	...	...	...	8·00	8·00	9·00	9·00	17·00	17·00
8	Instalment Payment ...	6·50	...	12·26	...	1·76	...	3·33	...	23·85	...

CHAPTER XIII

TRANSPORT AND COMMUNICATION

General Aspects

1. Adequate transportation facilities at reasonable cost is vital to the economic and social development of the Union although the provision of adequate transportation facilities is not capable by itself of promoting economic growth. But even though transport alone will not achieve economic development it can also be said that development will not be achieved without adequate transportation.

2. This being the case, the Government has in the past given emphasis to the rehabilitation and improvement of the transport system which was substantially destroyed during the war and the subsequent insurrections. Transportation has received a larger share of the public investment funds than has any sector of the economy ; 23·1 per cent of Government capital funds were expended in the past eight years. Substantial rail and water facilities have been restored so that, while the total facilities are still not equal to the pre-war level, they are sufficient to cope with the present volume of traffic. Except for the airways, current traffic capacity for goods exceeds the actual volume carried by the transportation system. A large part of the explanation for the sizable percentage of excess capacity lies in the competitive nature of the major lines of transportation in Burma and the marked deficiency of lines of transport (especially East-West) which would promote complementarity among the different modes of transport.

3. Therefore while the Second Four-Year Plan provides for additional capacity largely with regard to specialized traffic and for facilities to improve operating efficiency, it also seeks to provide for a better co-ordination between the various means of transport in the light of long-term considerations which should guide their development. Measures taken or planned towards the achievement of this end are indicated in the following relevant sections.

4. On matters of transport co-ordination, there will also be a closer liaison at the planning level, between the Ministry of Planning and the Transport Advisory Committee, constituted in 1957 for the purpose of advising the Government on co-ordination and regulation of transport within the country. Measures to liberalize import licensing of trucks and remove obstacles hampering the development of road transport in the private sector are also being pursued. Encouragement will also be given to the private sector in the provision of riverine transport in areas seen fit by the Government. Under the Second Four-Year Plan capital expenditures on transportation facilities will be (29·4) per cent of total Government capital expenditures.

5. The general objectives of the Second Four-Year Plan as they relate to transportation development are :—

(*a*) To provide adequate facilities for the efficient movement of foreign and domestic commerce and trade.

(*b*) To provide this service at reasonable rates, which are high enough to yield a good return on the investment, yet low enough to encourage production and trade.

(*c*) To provide sufficient facilities to allow a free and easy passenger traffic between the different parts of the country, in order that national unity may be fostered and emphasized.

(*d*) To provide access to all parts of the country, so that all the people may benefit from the exchange of goods, services and ideas.

(*e*) To provide for a better co-ordination between the various means of transport.

Railways

6. A large portion of the foreign exchange required under the Second Four-Year Plan for the capital programme of the Railways will be made available through a loan from the International Bank for Reconstruction and Development. In December 1960, the Government negotiated a loan from the World Bank for 14 million dollars (K 665 lakhs) " to meet part of the foreign exchange cost of the Burma Railways' Four-Year Development Programme, 1960—64, particularly the parts thereof concerning dieselization ". " Proceeds of the loan will be used to purchase diesel locomotives, railcars, spare parts and workshop equipment ".

7. The railway development programme consists of the replacement and improvement of rolling stock destroyed during World War II and the subsequent insurrection and the renewal and improvement of tracks, bridges and other service facilities. While the rehabilitation programme has been substantially completed the Second Four-Year Plan continues to provide for equipment and facilities to secure economy and improve operating efficiency. Measures designed to improve the utilization of stock are also being taken. Under the Second Four-Year Plan K 23·0 crores are to be expended on capital improvement of the Railways compared to K 21·4 crores in the past four years.

8. The Second Four-Year Plan contemplates a marked improvement in the services rendered by the Railway system.

TABLE 91.—*Estimated Rail Traffic for the* 2nd *Four-Year Plan*

——	*Pre-war* 1940-41	*Present* 1959-60	*Four Year Plan* 1964-65.
1. Passengers (million)	19·8	39·0	44·8
2. Passenger-miles (million) ...	499·8	969·1	1,123·3
3. Freight (million tons)	4·0	3·1	3·5
4. Freight (million ton-miles) ...	707·8	474·6	535·8

Passenger traffic should increase by about 15 per cent during the next four years and should be more than double of pre-war. Freight traffic should increase by about 12 per cent during the next four years. Although the level reached would be substantially below pre-war levels, carrying capacity will be about equal to demand. Specific needs such as carrying capacities for oil and timber, etc., will however have to be met.

Rolling Stock

9. At present, the Burma Railways have 303 locomotives, 10,733 freight wagons and 1,174 passenger coaches compared to 358 locomotives, 10,567 freight wagons and 1,167 passenger coaches respectively in the pre-war period. The freight wagons in general should be numerically sufficient for the present and the volume of traffic that will be generated by the Plan. Current freight traffic is only two-thirds that of pre-war. Passenger traffic is almost double that of pre-war. However half the passengers were carried on the Rangoon circular railway and other suburban lines. In view of the enormous increase in volume of passenger traffic, perceptible relief can come only with more coaching stock becoming available and permiting more passenger service. Therefore the Plan provides for 13 additional sets of 3 car diesel units and 5 sets 2 axle diesel rail-bus to augment the circular railway services.

The foreign exchange required for these items except for 4 units of the 13 three car diesel units will be made available as part of a loan from the International Bank for Reconstruction and Development. In addition to these locomotives and railcars, 4 Bogie upper with vestibules, 15 Bogie Night composite, 2 Bogie Day third with vestibules, 3 Bogie Full Mail with vestibules, 1 Bogie Brake Quarter Mail with vestibules, 6 Bogie Brake Restaurant with vestibules and 3 Bogies Resturant with vestibules will be purchased with Reparation funds. Also 174 coaching underframes will be procured in addition to fitting necessary electrical installations to some 70 underframes. A number of passenger carriages including night and day carriages will be built by contract as well as in own workshops to meet specialized requirements. Under the Plan installation of automatic signalling and doubling of track will also be completed to increase line capacity, and avoid occurrence of mishap. However, realizing that mishap also originates from human errors and negligence, schemes are being formulated to expand training programmes on the one hand, and increase disciplinary and inspection work on the other.

Purchase of Locomotives

10. The Plan provides funds for the purchase of 50 diesel electric locomotives complete with spares and equipment. These will also be made available as part of the IBRD loan mentioned above and thus begins the first phase of its long range locomotive replacement programme. One-fifth of the locomotive fleet have passed their normal useful life and will have to be gradually replaced. Six mainline diesel locomotives have been obtained and put into operation in 1957-58 as an experiment to dieselization. Some 3 YB type boilers will be procured for replacements towards at the end of the Plan so that the present locomotive power is not seriously impaired.

Railway Mileage

11. Provision is also made for the restoration of about 55 miles of track out of a total of 539 miles of war-damaged sections remaining to be rehabilitated. The following table shows the route and track mileage pre-war, at present and at the end of the Second Four-Year Plan. Plans are being made to carry out during this Plan period a preliminary survey for a line joining Kalaw and Loikaw.

TABLE 92.—*Estimated Route and Track Mileage at the end of the Plan*

—	*Pre-war* 1940-41	*Present* 1959-60	*Four-Year Plan* 1964-65
Route mileage	2,059	1,858	1,880
Track mileage	2,852	2,313	2,368

Other Railway Programmes

12. In addition to the above, the Railways Board has a well rounded programme for improving carrying capacity and operating efficiency.

(*a*) *Track improvement.*—This includes replacing worn out rails with new and heavier rails, replacing sleepers, ballast, etc. The back-log of neglect during the insurrection period is now being rectified in stages until the entire system has adequate trackage. This will permit speeding up schedules, which are now often reduced because of the need to operate at safe speeds on sections with worn out tracks and will facilitate smooth running of diesels.

(*b*) *Structural works.*—This includes the improvement of bridges, service buildings and staff quarters for essential railway workers. Sittang and other temporary bridges will be completed while the engineering workshop at Insein, Mandalay and Myitnge, will fully be equipped.

Inland Waterways Transport

13. The restoration of riverine transport has received appropriate priority and a large amount of rehabilitation and replacement has already been planned although only part of it is completed. The Second Four-Year Plan will therefore permit the IWTB to continue implementing such remaining replacement programmes and purchase some more vessels for specific and specialized service requirements, for the Arakan Section and the Chindwin area. Most of the foreign exchange required under the Second Four-Year Plan will now be made available through a loan from the International Co-operation Administration of the United States. Under the Second Four-Year Plan K 4·5 crores is provided for the capital improvement of the IWTB compared to K 5·0 crores in the past four years.

14. Although a large amount of rehabilitation and replacement has been achieved, estimated riverine transport is still below the pre-war level but the freight traffic will surpass that level by the end of the Second Four-Year Plan.

TABLE 93.—*Estimated Riverine Traffic at the end of the Plan*

—	*Pre-war*	*Present* 1959-60	*Four-Year Plan* 1964-65
Passenger (million)	7.0	4.9	5.7
Freight (million tons)	1.0	0.9	1.2

Altogether 75 new vessels are to be acquired and these include river salvage vessels, oil tankers, water tender, harbour tugs, dredger, hopper, pusher tug and barges, and double deck stern wheelers.

15. In addition to increasing the flotilla the Plan provides funds for improving the maintenance facilities employees' accommodations of three dockyards at Dalla, Moulmein and Mandalay, the extension of the Rangoon Foundry and setting up of small workshops at Chauk, Monywa and Bassein. These should reduce repair time and improve operating efficiency.

16. The diesel training centre established at Dalla under the sponsorship of the International Labour Organization, will continue to train diesel mechanics for the IWTB as well as for other public and private enterprises from the Union as well as from neighbouring countries.

Air Transport

17. The Union of Burma Airways is now operating 8 Dakotas on its internal scheduled flights and 2 Viscounts on its external scheduled flights. The third Viscount is chartered to a foreign agency. The Dakotas are becoming old and obsolete and therefore the Plan includes funds for replacing the Dakotas with new planes the type most suitable for operating within the Union. Funds are also provided for the purchase of engineering equipments and construction of a new engineering hanger and workshop to permit all the major checks to be carried out within the Union instead of sending abroad. The Board has also planned to construct quarters for the engineering staff. In order to improve efficiency and offset economy, the Board's fleet of motor vehicles will be augmented.

Civil Aviation Department

18. The improvement and modernization of airstrips will be continued under the Second Four-Year Plan by the Civil Aviation Department. At present there are 33 airfields in Burma used by commercial airlines. Of these 26 are fair-weather and 7 all-weather fields. The Plan provides for the continuation of the construction of 5 new airfields and the improvement of several other fields. The safety of air transportation does not lie on good airfields alone. In order to improve the airfield operational efficiency, radio equipments, fire fighting equipments and the like which will contribute to the efficiency and safety will be procured during the Plan period. K 54 lakhs is provided for this purpose.

Ocean and Coastal Shipping

19. Conditions are such in the Union that the operation of a moderate sized national fleet would be to her advantage, provided the right type of vessels and an enterprising system of management are available. The volume of trade generated in the Union is sufficiently large and varied to make a moderate size shipping venture profitable. Such a fleet also would not only make possible trade that otherwise cannot exist but by giving Union exports top priority it would also mean considerable savings and earnings of foreign exchange.

20. The Union of Burma Shipping Board was running two coasters and one shallow draft ship in Arakan and Tenasserim coastal routes and two freighters for the overseas coal trade until it was taken over by the Five Star Line, another new national line, a subsidiary of the Defence Services Institute. This winding up will not only save substantial amount for the Government, but also enhance the chances of survival or success of the one and only Union Shipping line.

Ports and Harbour

21. The Port of Rangoon handles about 85 per cent of the Union's foreign trade and 45 per cent of its coastal commerce. The efficient functioning of this port is therefore a basic necessity for economic progress in the Union and therefore its rehabilitation was given high priority. The rehabilitation programme of the Board which began in 1952 will be substantially completed with the opening of the Sule Pagoda Wharves. The Port will then be in a position to handle the expected volume of traffic efficiently and at low cost.

22. The following table shows the expected volume of traffic at the end of the Second Four-Year Plan compared to the present traffic and the pre-war :—

TABLE 94.—*Volume of Trade in the Port of Rangoon*

(In thousand of long tons)

—	*Pre-war* 1940-41	*Present* 1959-60	*Four-Year Plan* 1964-65
Exports	3,583	2,061	3,178
Imports	1,394	1,263	1,327

The tonnage of imports is almost equal to the pre-war tonnage but the exports tonnage remained below the pre-war level as a result of the decline in the volume of exports of many products of which rice is the most prominent.

23. The Second Four-Year Plan provides K 3·5 crores for the capital programme of the Port and includes completion of the following programmes for the Port of Rangoon,

Wharves

24. Reconstruction of three general cargo berths, transit sheds and other accompanying buildings at Sule Pagoda Wharves to meet the expected growth in general cargo traffic since the six berths available are used to capacity. Mechanical cargo handling is also being installed to speed up loading and discharge of vessels. A modern terminal building for the convenience of passengers in transit will also be constructed.

Flotilla

25. Procurement of ten more vessels for pilotage, river survey and conservancy will almost complete the rehabilitation of the flotilla. These will include one bucket dredger and one new hopper suction dredger.

Pontoons, Jetties and Moorings

26. Old ones will be replaced and new ones built to provide for growth in inland traffic especially private crafts.

Dockyard

27. A new slipway at workshop for docking the repair of vessels up to 1,500 tons is being built.

Miscellaneous Projects

28. These include development of Lanmadaw Foreshore complete with fish and vegetable market place to provide for growth in inland traffic, conversion of Theinbyu Street Depot into a passenger station for the convenience of inland riverine passengers, construction of a few staff quarters for Port Officers, Port Police, nurses and midwives and installation of lighting facilities. An extension of storage godown at Hteedan is also under construction.

Outports

29. The Government will also soon enter into negotiation with the World Bank for assistance to a co-ordinated development of the Union's outports such as Akyab, Bassein, Moulmein and possibly also Mergui.

Marine

30. As an interim measure the Marine Department has plans for providing some of these outports as well as Rangoon Port with crafts and dredgers, navigational aids and foreshore facilities, in addition to extending and improving marine facilities including dockyards and slipways. Another major double-edge challenge to this Department is erosion of foreshores at some riverine towns and the receding navigability of the rivers. In order to meet this challenge a long range scheme will be initiated to survey the Chindwin and Irrawaddy rivers with a view to training them to serve the country. In addition to procuring some over one hundred crafts for general administration purposes, about 39 crafts will be built in Government Dockyards at Rangoon and Mandalay.

Highways and Road Transport

31. The highway system suffered severe damage during the war and the subsequent insurrection. The Government therefore gave a high priority to its improvement and extension in the Plan for economic development. The general objectives of the highway development programme are—

(*a*) The restoration of reasonable, safe and economical traffic conditions in the presently most congested portions of the highway system.

(*b*) The support of increased demand generated by the growth of industry, agriculture and commerce.

(*c*) The stimulation of further increase in trade, commerce and production.

(*d*) Achieving complementarity among the modes of internal transport.

32. To accomplish completely the general objectives of the highway plan would require more resources than Burma can afford in the next few years for this purpose. Because of the present conditions of the existing highways system special attention is given to their maintenance and rehabilitation. There are large arrears in maintenance and unless the normal schedule of maintenance is caught up with, there is fear that large portions of highway will fall into disuse in the long run. Therefore the Plan proposes to rehabilitate and maintain at least 200 miles of roads annually. The mileage is to be increased as the programme is reviewed annually, resources permitting. However the Plan also provides funds for the continuation of several new projects the need for which are largely dictated from the point of view of maintenance of law and order and the promotion of unity of the far flung components of the Union, politically and culturally apart from economic benefits. Particularly the formulation of a programme of maintenance and extension of feeder roads is under consideration.

33. The Plan also recognizes the major deficiency in the network and therefore makes at least a start at correcting the deficiency. A glance at a transportation map of the Union will reveal that its major need in Burma proper is for East-West means of transport. Because of this deficiency the benefits of the complementary modes of transport are minimized. Therefore to begin with, funds for the construction of Prome-Toungoo Road—the first major East-West Road network is included in the Plan. This road will very much enhance the usefulness of the Prome-Taungup road already under construction. Other major road programmes include Kyaukme-Bhamo Road, Thanatpin-Kayan Road, certain stretches of Rangoon-Mandalay Road and Rangoon-Prome-Mandalay Road. Major bridge works include Sittang and Thaketa bridges.

34. Agreement has also been reached between the Union Government and the International Co-operation Administration of the United States for a resurvey of the Rangoon-Mandalay highway (Route 1) to see if a suitable plan can be made for improvement and development at an economical cost. One alternative is for the road to follow completely new alignments at either end—Rangoon to Pegu on the one hand and Mandalay to Meiktila on the other—with improvements to the existing road in between. If this alternative is followed the new portions of the road would be passing through potentially productive areas, previously difficult of access, and the road would provide opportunities for promotion and exploitation of the economic possibilities of these remote areas. Obviously the road would also facilitate easy flow of motor traffic, goods and passengers between the two designated points and their outlying areas, as well as a better traffic flow all along the route.

Road Transport

35. The road transport industry in the Union has been and is in the hands of private enterprise which can boast of no large integrated economic organization capable of accepting legal and financial responsibility. While the voluntary development of owner associations may have helped to control uneconomical competition and introduces some operating efficiencies, it has not provided a satisfactory solution to the pressing problems facing this vital national industry such as the provision of capital resources to purchase adequate equipment and spares, the pooling of technical ability in the operation and maintenance of such equipment, especially diesels. The problem is more serious because an estimated 75 per cent of the trucks and buses currently in use are 12 years old or more. The relative cost of cars and problems of imports, largely foreign exchange are further obstacles to the solution of this problem.

36. The Transport Advisory Committee in undertaking studies with respect to co-ordination of all phases of transport will have to tackle this problem first and foremost. In fact, the control of road transport industry is required before any progress of major significance can be made in the direction of transport co-ordination. In view of the industry conditions and Government policy the objective is to force; through a system of licensing and ancillary controls, the consolidation and rationalization of existing industry elements to produce efficient, economic and self-sustaining units. In other words the control measures will be designed in such a way as to create an operational climate conducive to the stimulation of healthy growth and development, at the same time permitting sufficient competition to produce a high standard of service and avoid complacency within the industry. As an interim measure, the hitherto restrictive licensing policy for the imports of trucks and buses has been liberalized.

Communication

37. By the beginning of World War II, the Union had a well developed and efficiently operated communication system. There was an extensive network of telegraph lines involving some 33,000 miles of wire connecting 656 telegraph offices including two land lines to India. The populated areas of the Union had adequate local and long distance telephone services with a link to international radio telephone *via* Madras. Wireless was utilized for shipping, aeronautical, meteorological, broadcasting and international services. These telecommunication facilities were almost entirely destroyed during the war.

38. The rehabilitation of the telecommunication facilities was initiated after the war and is substantially completed.

39. The Second Four-Year Plan provides funds for the completion of a varied and comprehensive programme which will provide the Union with a modern flexible means of communication both internally and internationally.

(*a*) *Rangoon Telephone Automatization.*—The construction of a completely automatic telephone system in Rangoon and Insein is in hand. When completed will provide Rangoon with 136,000 telephones. So far 6,289 telephones have been installed. The Second Four-Year Plan provides K 17 lakhs for the completion of this project. With a view to full utilization of facilities already installed, Government has already decided revision of telephone rates both in the metropolitan area and outside.

(*b*) *Landline rehabilitation and expansion*—This project provides for the restoration of lines between Rangoon, Tharrawaddy, Prome, Yenangyaung, Meiktila, Mandalay, Pegu Toungoo and Thazi. During the period of the Plan K 12 lakhs will be spent on this project.

(*c*) *Carrier Telephone and Telegraph System*.—To restore Rangoon-Mandalay carrier system to provide adequate and reliable telecommunication facilities K 14 lakhs are made available for this project.

(*d*) *Improvement of Town Telephone Systems*.—This consists of the modernization and expansion of the district telephone systems. Automization of Mandalay Telephone system is also provided. During the period of the Plan K 25·80 lakhs will be spent on this project.

(*e*) *Internal and External* (*H.F.*) *Radio Communication System*.—Completion of this project will permit expansion of services between numerous points in the Union as well as between the Union and international points. The Plan provides K 20 lakhs for its completion.

(*f*) *Other Projects*.—These include installation of new telegraph equipment Delta U.H.F./V.H.F. radio telephone and telegraph communication and Radio Regulation Bureau.

Post

40. The Second Four-Year Plan includes funds for the completion of an initial programme which will ultimately provide the Union with a wide-spread, efficient and reliable postal system.

(*a*) *Building*.—This programme consists of replacement by serviceable buildings of old and dilapidated buildings and also those destroyed during the War.

(*b*) *Purchase of Motor Vehicles*.—This programme consists of the purchase of several motor vans to expedite speedy clearance and delivery of mail.

Meteorology

41. The Second Four-Year Plan includes funds for improvement and expansion of observational and forecasting activities of the Meteorological Department, particularly for systematic recording, collection, processing and research of hydrometeorological data for effective and careful use of water resources. Major items of expenditure are meteorological instruments, a radar wind observatory, a seismographic observatory and hydrological services.

TRANSPORTATION (A)

TABLE 95.—*Detailed Capital Expenditure Under Four-Year Plan* (1961-62 *to* 1964-65).

(In K Lakhs)

Sr. No. (1)	Name of Agency or Projects. (2)	1961-62 Total (3)	1961-62 F. E. (4)	1962-63 Total (5)	1962-63 F. E. (6)	1963-64 Total (7)	1963-64 F. E. (8)	1964-65 Total (9)	1964-65 F. E. (10)	Total Total (11)	Total F. E. (12)
A	Burma Railways Board	684·23	345·57	622·96	347·93	649·72	356·76	345·75	1,11·21	2,302·66	1,161·47
B	Inland Water Transport Board ...	294·02	204·15	103·29	89·76	22·19	8·66	27·85	7·00	447·35	309·57
C	Union of Burma Airways	55·90	23·70	33·40	14·30	78·90	76·70	47·85	45·00	216·05	159·70
D	Civil Aviation Department	52·63	17·80	93·68	38·20	101·99	62·80	42·14	19·97	290·44	138·77
E	Board of Management for the Port of Rangoon.	201·69	99·10	78·97	55·28	36·77	48·97	65·54	32·20	417·97	214·55
F	Marine Department	195·21	150·09	164·94	125·12	144·31	108·41	74·84	54·03	579·30	437·65
G	Light House Department	1·40	...	9·98	5·85	0·56	...	2·50	...	14·44	5·85
H	Meteorological Department	9·86	3·30	9·66	5·78	4·71	3·00	7·32	2·72	31·55	14·80
	Total ...	1,494·94	843·71	1,116·88	682·22	1,039·15	665·30	613·79	272·13	4,299·76	2,442·36
A	UNION OF BURMA RAILWAYS BOARD.	684·23	345·57	622·96	347·93	649·72	356·76	345·75	111·21	2,302·66	1,161·47
1	**Rolling Stock**	296·04	224·36	337·05	250·58	367·85	274·91	26·21	14·21	1027·15	764·06
	(*a*) Locomotives	142·51	121·36	142·51	121·33	147·75	117·95	...	...	432·77	360·64
	(*b*) Boilers	...	...	...	...	...	...	5·08	4·42	5·08	4·42
	(*c*) Carriages	114·85	81·83	171·79	118·47	156·63	110·97	4·61	4·26	447·88	315·53
	(*d*) Wagons	30·47	18·57	19·51	10·78	12·73	5·39	5·95	...	68·66	34·74
	(*e*) Miscellaneous	8·21	2·60	3·24	...	50·74	40·60	10·57	5·53	72·76	48·73
2	**Works**	360·46	121·21	255·55	97·35	216·65	81·85	253·25	97·00	1,085·91	397·41
	(*a*) Track	110·00	40·00	115·80	39·00	112·90	39·00	104·00	37·00	442·70	155·00
	(*b*) Structural engineering bridges ...	105·00	15·00	40·00	10·85	30·00	8·85	33·00	13·00	208·00	47·70
	(*c*) Other structural works	133·23	59·98	78·75	27·50	52·75	14·00	96·25	27·00	360·98	128·48
	(*d*) Miscellaneous	12·23	6·23	21·00	20·00	21·00	20·00	20·00	20·00	74·23	66·23
3	**General charges and other liabilities** ...	27·73	...	30·36	...	65·22	...	66·29	...	189·60	...
B	INLAND WATER TRANSPORT BOARD.	294·02	204·15	103·29	89·76	22·19	8·66	27·85	7·00	447·35	309·57
1	New Fleet *	209·37	171·40	94·37	84·84	18·19	8·66	19·53	7·00	341·46	271·90
2	Dockyard renovation	66·71	26·18	4·92	4·92	...	...	4·32	...	75·95	31·10
3	Buildings	16·68	5·52	4·00	...	4·00	...	4·00	...	28·68	5·52
4	Accounting Machine	0·06	0·05	...	...	...	...	...	...	0·06	0·05
5	Motor vehicles	1·20	1·00	...	...	...	...	...	...	1·20	1·00

C	UNION OF BURMA AIRWAYS BOARD	**55·90**	**23·70**	**33.40**	**14·30**	**78·90**	**76·70**	**47·85**	**45·00**	**216·05**	**159·70**
1	Purchase of Aircraft	22·50	22·50	12·50	12·50	75·00	75·00	42·50	42·50	152·50	152·50
2	Engineering Equipment	1·00	...	1·00	...	1·00	...	1·50	...	4·50	...
3	New Hangers and Workshop	30·00	...	17·00	...	...	...	...	...	47·00	...
4	Office Equipment	0·20	0·20	0·20	0·20	0·20	0·20	1·00	1·00	1·60	1·60
5	Other Minor Building Works ...	1·00	...	1·00	...	1·00	...	1·00	...	4·00	...
6	Motor Vehicles	1·00	1·00	1·50	1·50	1·50	1·50	1·50	1·50	5·50	5·50
7	Traffic and Catering Equipment ...	0·10	...	0·10	0·10	0·10	...	0·25	...	0·55	0·10
8	Others	0·10	...	0·10	...	0·10	...	0·10	...	0·40	...
9	Staff Housing Scheme *	...	...	...	...	...	...	...	...	...	...
D	CIVIL AVIATION DEPARTMENT	**52·63**	**17·80**	**93·68**	**38·20**	**101·99**	**62·80**	**42·14**	**19·97**	**290·44**	**138·77**
1	**A. Works**										
	Construction, Improvement of aerodromes and buildings.	38·60	5·00	77·00	23·70	89·50	51·60	28·82	8·48	233·92	88·78
2	**B. Purchase of Machinery**										
	Radio equipment, Fire fighting equipment and various equipment.	14·03	12·80	15·78	14·00	11·59	10·70	12·42	10·99	53·82	48·49
3	**C. Purchase of Vehicles**										
	Vehicles required for operation of various aerodromes.	...	...	·90	·50	·90	·50	0·90	·50	2·70	1·50
E	BOARD OF MANAGEMENT FOR THE PORT OF RANGOON	**201·69**	**99·10**	**103·97**	**52·28**	**46·77**	**30·97**	**65·54**	**32·20**	**417·97**	**214·55**
1	River Training works and clearance ...	2·00	0·50	2·00	0·50	1·00	0·25	...	...	5·00	1·25
2	Wharves and equipment	38·25	26·10	25·00	25·00	10·00	10·00	21·00	7·00	94·25	68·10
3	Godowns and other buildings...	7·25	2·50	7·00	1·90	2·00	0·95	0·59	0·12	16·84	5·47
4	Flotilla	31·60	6 50	...	...	...	...	8·20	7·10	39·80	13·60
5	Pontooons, Bridges and Jetties ...	29·00	22·00	16·00	12·25	8·00	7·00	15·00	10·00	68·00	51·25
6	Mooring Plant	2·00	1·50	2·00	1·50	2·00	1·50	2·00	1·50	8·00	6·00
7	Motor Vehicles, Cranes, Tractors, etc. ...	21·00	14·00	2·47	2 38	10·27	6·52	3·60	2·25	37·34	25·15
8	Plant and Machinery	11·09	6·00	3·50	2·75	3·50	2·75	0·47	0·28	18·56	11·78
9	Miscellaneous	59·50	20·00	46·00	6·00	10·00	2·00	14·68	3·95	130·18	31·95

* Includes 3 tugs and 16 barges for Cement Factory.

TABLE 95.—*Detailed Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65)—contd.

(In K Lakhs)

Sr. No. (1)	Name of Agency or Projects (2)	1961-62 Total (3)	1961-62 F. E. (4)	1962-63 Total (5)	1962-63 F. E. (6)	1963-64 Total (7)	1963-64 F. E. (8)	1964-65 Total (9)	1964-65 F. E. (10)	Total Total (11)	Total F. E. (12)
F	MARINE DEPARTMENT ...	**195·21**	**150·09**	**164·94**	**125·12**	**144·31**	**108·41**	**74·84**	**54·03**	**579·30**	**437·65**
1	**Procurement of Craft for the General Administration and Police.**	**80·33**	**69·19**	**81·86**	**70·72**	**81.85**	**70·72**	**47·88**	**41·54**	**291·93**	**252·17**
	(*a*) 45 (Twin Screw 55 UB's) ...	33·99	29·19	35·52	30·72	35·52	30.72	15·4	1·54	106·57	92·17
	(*b*) 12 (River Touring Crafts) ...	17·34	15·00	17·34	15·00	17·34	15·00	17·34	15·00	69.36	60·00
	(*c*) 50 (Single screw 50 UB's) ...	29·00	25·00	29·00	25·00	29·00	25·00	29·00	25·00	116·00	100·00
2	**Procurement of Dredgers for the Dredging Department.**	**46·00**	**38·50**	...	...	...	...	...	...	**46·00**	**38·50**
	(*a*) 4 Standard Cutter Suction Dredgers	30·00	25·00	...	...	...	...	...	...	30·00	25·00
	(*b*) 2 Bucket Dredgers	16·00	13·50	...	...	...	...	...	...	16·00	13·50
3	**Procurement of Crafts including Plant and Machinery.**	**16·65**	**14·00**	**16·65**	**14·00**	**12·00**	**10·00**	...	...	**45·30**	**38·00**
	(*a*) 6 Tugs	12·00	10·00	12·00	10·00	12·00	10·00	...	...	36·00	30·00
	(*b*) 2 Landing Crafts	4·65	4·00	4·65	4·00	...	...	...	...	9·30	8·00
4	**Floating Dock for Mandalay** ...	...	...	**11·10**	**9·00**	...	...	...	...	**11·10**	**9·00**
	(*a*) Floating Dock	...	...	11·10	9·00	...	...	...	...	11·10	9·00
5	**Plant and Machinery**	**2·93**	**2·90**	**2·93**	**2·90**	**0·18**	**0·15**	**0·18**	**0·15**	**6·22**	**6·10**
	(*a*) Plant and Machinery for Government Dockyard, Rangoon.	2·75	2·75	2·75	2·75	...	...	...	...	5·50	5·50
	(*b*) Plant and Machinery for Mandalay Dockyard.	0·18	0·15	0·18	0·15	0·18	0·15	0·18	0·15	0·72	0·60
6	**Local Construction at Government Dockyard.**	**20·00**	**4·50**	**20·00**	**4·50**	**20·00**	**5·54**	**17·98**	**4·34**	**77·98**	**18·88**
	(*a*) Government Dockyard, Rangoon										
	(i) 26 Twin Screw 55 UB's ...	18·00	4·00	18·00	4·00	16·00	3·56	...	...	52·00	11·56
	(ii) 10 Single Screw 50 UB's ...	...	...	...	...	2·00	0·48	17·98	4·34	19·98	4·82
	(*b*) Government Dockyard, Mandalay										
	(i) 3 Nos. (Twin screw 55 UB's) ...	2·00	0·50	2·00	0·50	2·00	1·50	...	...	6·00	2·50
7	**Procurement of Craft for the River Conservancy Department.**	**23·80**	**21·00**	**27·40**	**24·00**	**25·20**	**22·00**	**8·80**	**8·00**	**85·20**	**75·00**
	(1) 19 Buoying Launches	11·00	10·00	11.00	10·00	11·00	10·00	8·80	8·00	41·80	38·00
	(2) 5 " L " Type Launches	4·40	4·00	4·40	4·00	2·20	2·00	...	...	11·00	10·00
	(3) 1 " K " Class Shallow Draft Craft ...	8·40	7·00	...	...	...	...	...	...	8·40	7·00
	(4) 2 Snag Lifters	...	...	12·00	10·00	12·00	10·00	...	...	24·00	20·00

8	**Erosion**	5·50	...	5·00	...	5·07	...	...	...	15·57	...
	Erosion of Bassein Foreshore ...	5·50	...	5·00	...	5·07	...	...	...	15·57	...
G	LIGHT HOUSE DEPARTMENT ...	1·40	...	9.98	5·85	0·56	...	2·50	...	14·44	5·85
	Light House Workshop	1·40	...	3.32	...	0·56	...	2·50	...	7·78	...
	Main Workshop Building	·68	...	...	...	...	...	...	...	·68	...
	Staff Quarters	·72	...	...	...	...	...	...	...	·72	...
	Light House Office	...	...	·86	...	...	...	...	...	·86	...
	Workmen Quarter	...	...	2·46	...	...	...	...	...	2·46	...
	Stores Godowns	...	...	...	...		...	...	...	0·56	...
	Light House Jetty—										
	(1) Bailey Bridge	...	...	...	...	0·56		1·50	...	1·50	...
	(2) Barge	...	...	...	...	...	...	1·00	...	1·00	...
	Procurement from Abroad ...	...	...	6·66	5·85	...	...	...	...	6·66	5·85
	(1) One Light Float complete with lighting equipment.	...	...	5·50	4·92	...	...	...	...	5·50	4·92
	(2) Equipment	...	...	1·16	·93	...	...	...	...	1·16	·93
H.	BURMA METEOROLOGICAL DEPARTMENT.	9·86	3.30	9·66	5·78	4·71	3·00	7·32	2·72	31·55	14·80
1	Meteorological Instruments	3·00	3.00	3·00	3·00	3·00	3·00	2·12	2·12	11·12	11·12
2	Motor Transport	0·30	0.30	0·20	0·20	...	...	0·60	0·60	1·10	1·10
3	Hydrological services	1·60	...	2·30	...	0·80	...	1·50	...	6·20	...
4	Agricultural Meteorology	0·30	...	0·30	...	0·30	...	...	...	0·90	...
5	Radar wind observatory	2·30	...	...	...	...	...	2·40	...	4·70	...
6	To open new observatories	0·20	...	0·20	...	0·20	...	...	...	0·60	...
7	To convert Part-time observatories to wholetime observatories.	0·06	...	...	...	...	...	...	...	0·06	...
8	Seismographic observatory	1·10	...	...	...	...	...	0·70	...	1·80	...
9	Daily ascents of Radiosende	0·30	...	0·30	...	0·30	...	...	...	0·90	...
10	Expansion of instruments section ...	0·70	...	...	...	...	...	...	...	0·70	...
11	Expansion of Climatology section ...	...	...	0·23	...	...	...	...	...	0·23	...
12	To open new Radio-sonde observatories ...	...	...	0·11	...	0·11	...	...	...	0·22	...
13	To set up a Radio-sonde-calibration centre	...	...	0·44	...	...	...	...	...	0·44	...
14	To open Regional meteorogical centre at Mandalay.	...	...	2·58	2·58	...	...	...	...	2·58	2·58
15	Works *	...	...	...	...	...	...	...	...	...	...

* Under N.H.B. (13·60) Lakhs.

COMMUNICATION (B)

TABLE 95.—*Detailed Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65) concld.

(In K Lakhs)

Sr. No. (1)	Name of Agency or Projects. (2)	1961-62 Total (3)	1961-62 F. E. (4)	1962-63 Total (5)	1962-63 F. E. (6)	1963-64 Total (7)	1963-64 F. E. (8)	1964-65 Total (9)	1964-65 F. E. (10)	Total Total (11)	Total F. E. (12)
A	Highways Department *	300·74	95·64	930·58	309·55	947·98	309·38	989·81	318·57	3,169·11	1,033·14
B	Telecommunication Department ...	102·19	76·48	45·15	30·53	37·86	29·43	64·88	49·24	250·08	185·68
C	Postal Department	0·90	0·55	0·54	0·25	...	...	...	...	1·44	0·80
	Total ...	403·83	172·67	976·27	340·33	985·84	338·81	1,054·69	367·81	3,420·63	1,219·62
A	DEPARTMENT OF HIGHWAYS † ...	318·45	100·07	941·78	312·35	962.43	312·95	989·81	318·57	3,212·47	1,043·93
	Communications	274·74	70·64	275·58	74·55	272.98	64·38	295·81	73·57	1,110·11	283·14
	CHIN SPECIAL DIVISION	16·00	4·00	17·00	4·25	16·00	4·00	16·00	4·00	65·00	16·25
1	Mindat—Matupi (72 M)	6·00	1·50	6·00	1·50	6·00	1·50	6·00	1·50	24·00	6·00
2	Paletwa—Matupi (105 M)	5·00	1·25	6·00	1·50	8·00	2·00	10·00	2·50	29·00	7·25
3	No. 2 Stockade—Fortwhite (10 M) ...	5·00	1·25	5·00	1·25	2·00	0·50	...	...	12·00	3·00
	OTHER AREAS	258·74	66·64	258·58	70·30	256·98	60·38	279·81	69·57	1,054·11	266·89
1	Waw-Sittang (16 M)	3·00	0·75	3·00	0·75	3·00	0·75	3·00	0·75	12·00	3·00
2	Hlegu-Phauggyi-Zaungtu (40 M) ...	2·00	0·50	2·00	0·50	2·00	0·50	2·00	0·50	8·00	2·00
3	Toungoo-Tantabin-Zayatkyi Mon-Sittang-Thaton (130 M).	3·00	0·75	3·00	0·75	3·00	0·75	3·00	0·75	12·00	3·00
4	Mandalay-Madaya-Singu Wapyudaung-Mogok (64 M).	4·00	1·00	4·00	1·00	4·00	1·00	6·32	1·58	18·32	4·58
5	Pazundaung Bridge	2·85	0·71	...	...	...	...	...	...	2·85	0·71
6	Sittang Bridge	20·00	5·00	20·00	5·00	20·00	5·00	20·00	5·00	80·00	20·00
7	Prome-Toungoo (90 M)	7·50	1·88	10·00	2·50	10·00	2·50	10·00	2·50	37·50	9·38
8	Taungdwingyi-Taungnyo (52 M) ...	1·50	0·38	1·50	0·37	1·50	0·38	1·50	0·37	6·00	1·50
9	Kyaukme- Momeik- Mogok- Si- U- Bhamo (21 M).	10·00	2·50	10·00	2·50	10·00	2·50	10·00	2·50	40·00	10·00

10	Kinmaw-Taungup (40 M)	1·00	0·25	1·00	0·25	1·00	0·25	1·00	0·25	4·00	1·00
11	Myitkyina-Putao (90 M)	2·00	0·50	2·00	0·50	2·00	0·50	2·00	0·50	8·00	2·00
12	Gwa-Ngathainggyaung (47 M) ...	2·00	0·50	2·00	0·50	2·00	0·50	2·00	0·50	8·00	2·00
13	Ramree-Minbyin (40 M)	1·00	0·25	1·00	0·25	1·00	0·25	1·00	0·25	4·00	1·00
14	Thanatpin-Kayan (28 M)	10·00	2·50	19·00	4·75	19·00	4·75	19·00	4·75	67·00	16·75
15	Thaketa Bridge	51·30	14·30	30·58	13·30	25·25	10·70	13·30	7·45	120·43	45·75
16	Salin Saidoktaya (36 M)	1·00	0·25	1·00	0·25	1·00	0·25	1·00	0·25	4·00	1·00
17	Ondaw-Natkayaing-Myinmu (15 M) ...	1·50	0·37	1·50	0·37	1·23	0·31	...	...	4·23	1·05
18	Monywa-Ye-U (Monywa-Saingbyin (15 M)	1·50	0·37	1·50	0·38	1·50	0·37	...	...	4·50	1·12
19	Ye-U-Monywa (Shwebo District) (13 M)...	1·50	0·37	1·50	0·38	1·50	0·37	2·93	0·73	7·43	1·85
20	Kayan-Thongwa (12 M)	1·00	0·25	1·00	0·25	1·00	0·25	1·00	0·25	4·00	1·00
21	Thaton-Pa-an (24 M)	1·00	0·25	1·00	0·25	1·00	0·25	1·00	0·25	4·00	1·00
22	Pa-an-Hlaingbwe (24 M)	1·00	0·25	1·00	0·25	1·00	0·25	3·76	0·94	6·76	1·69
23	Prome-Taungup (110 M)	10·00	2·50	10·00	2·50	10·00	2·50	10·00	2·50	40·00	10·00
24	Meiktila-Thazi-Taunggyi-Kentung-Tachileik (182 M).	3·00	0·75	5·00	1·25	3·00	0·75	5·00	1·25	16·00	4·00
25	Toungoo-Mawchi (98 M)	5·00	1·25	5·00	1·25	5·00	1·25	5·00	1·25	20·00	5·00
26	Myitkyina-Kambaiti (63 M)	2·00	0·50	2·00	0·50	2·00	0·50	2·00	0·50	8·00	2·00
27	Sandoway-Gwa (96 M)	2·00	0·50	2·00	0·50	2·00	0·50	2·00	0·50	8·00	2·00
	Rangoon-Mandalay										
28	Thingangyun-Zayatkwin (23 M) ...	6·78	1·69	5·00	1·25	5·00	1·25	5·00	1·25	21·78	5·44
29	Zayatkwin-Toungoo (144 M)	30·67	7·67	30·00	7·50	30·00	7·50	20·00	5·00	110·67	27·67
30	Toungoo-Pyinmana (69 M) (Mile 175/0-244/0).	...	...	...	...	...	...	11·40	2·85	11·40	2·35
31	Pyinmana-Meiktila (93 M) (Mile 244/0-337/0).	...	...	...	...	...	...	12·50	3·13	12·50	3·13
32	Meiktila-Mandalay (94 M) (Mile 337/0-431/0).	...	...	...	...	...	...	12·40	3·10	12·40	3·10
	Rangoon-Prome-Mandalay										
33	Htaukkyan-Prome (Mile 21/2 to 193/7) ... (172⅝ M).	47·10	11·78	55·00	13·75	60·00	6·75	45·00	6·75	207·10	39·03
34	Prome-Aunglan (Mile 193/7 225/6)(31/7 M)	9·84	2·92	12·00	3·00	12·00	3·00	10·00	2·50	43·84	11·42
35	Aunglan-Magwe (Mile 255/6 345/0) (89¼ M)	12·70	3·20	15·00	3·75	15·00	3·75	12·00	3·00	54·70	13·70
36	Magwe-Myingyan (Mile 331/0 456/0) (125 M).	...	...	...	...	...	...	12·54	3·13	12·54	3·13
37	Myingyan-Mandalay (Nabu-aing-Myotha-Tada-U-Paleik) (56 M).	...	...	...	...	...	...	10·16	2·54	10.16	2·54
38	Thanbyuzayat-Ye (60 M)	...	...	...	...	1·00	0·25	1·00	0·25	2·00	0·50

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* Excludes provision for buildings which is included under construction Sector.

† Includes provision for Civil Works buildings.

TABLE 95.—*Detailed Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65)—concld.

(K Million)

Sr. No. (1)	Name of Agency or Projects. (2)	1961-62		1962-63		1963-64		1964-65		Total	
		Total (3)	F.E. (4)	Total (5)	F.E. (6)	Total (7)	F.E. (8)	Total (9)	F.E. (10)	Total (11)	F.E. (12)
	Buildings	**17·71**	**4·43**	**11·20**	**2·80**	**14·45**	**3·57**	...	...	**43·36**	**10·79**
	CHIN SPECIAL DIVISION	**5·24**	**1·31**	**0·50**	**0·12**	**0·50**	**0·13**	...	...	**6·24**	**1·56**
	A17. Education										
1	Construction of State Post-Primary School at Haka.	2·540	0·635	...	...	...	...	...	...	2·540	0·635
	A18. Medical										
2	Construction of 20-Bedded Hospital at Haka.	0·500	0·125	...	...	...	...	...	...	0·500	0·125
	A24. Civil Works										
3	Construction of Do H., Executive Engineer's Quarters at Falam.	0·500	0·125	...	...	...	...	...	...	0·500	0·125
4	Construction of DoH., Head Clerk, Upper Division Clerk and Lower Division Clerk Quarters at Falam.	0·100	0·025	...	...	...	...	...	...	0·100	0·025
5	Construction of DoH., Executive Engineer's Quarters at Mindat.	0·416	0·104	...	...	...	...	...	...	0·416	0·104
6	Construction of DoH., Divisional Accountant Quarters at Mindat.	0·067	0·017	...	...	...	...	...	...	0·067	0·017
7	Construction of DoH., Draftsman Quarters at Mindat.	0·236	0·059	...	...	...	...	...	...	0·236	0·059
8	Construction of DoH., Clerk and Tracer's Quarters at Mindat.	0·316	0·079	0·50	0·125	0·50	0·125	...	...	1·316	0·329
9	Construction of DoH., Executive Engineer's Office at Mindat.	0·570	0·142	...	...	...	...	...	...	0·570	0·142
	OTHER AREAS	**12·47**	**3·12**	**10·70**	**2·68**	**13·95**	**3·44**	...	...	**37·12**	**9·23**
	A10. General Administration										
1	Construction of Combined Court House for Deputy Commissioner and Other Officers at Akyab.	3·00	0·750	2·70	0·675	3·00	0·750	...	...	8·70	2·175

	A14. Police										
2	Construction of Permanent Police Station and Lock-up at Kyauktaw, Akyab District.	0·10	0·025	...	...	...	...	...	...	0·10	0·025
	A24. Civil Works										
3	Construction of Workshop Plant Park at Ywama, Insein.	1·42	0·355	1·00	0·250	...	...	...	...	2·42	0·605
4	Construction of Electrical and Mechanical Workshop and Quarters for DoH. Staff at Mandalay.	2·00	0·500	...	...	...	...	...	...	2·00	0·500
5	Construction of Executive Engineer's Quarters at Kyaukpyu.	0·10	0·025	...	...	...	...	...	...	0·10	0·025
6	Construction of Bungalow with Outhouses at Meiktila.	0·50	0·125	...	...	...	...	...	...	0·50	0·125
7	Construction of Bungalow at Warabote Mile 77 Myitkyina-Ledo Road.	0·35	0·088	...	...	0·350	0·037	...	...	0·70	0·125
8	Construction of Chief Engineer, DoH. Office at Rangoon.	5·00	1·250	7·00	1·750	10·60	2·650	...	...	22·60	5·650
	Tools and Plant—New Supplies ...	**25·00**	**25·00**	**25·00**	**25·00**	**25·00**	**25·00**	**25·00**	**25·00**	**100·00**	**100·00**
	Rangoon-Mandalay Highway	**1·00**	...	**630·00**	**210·00**	**650·00**	**220·00**	**669·00**	**220·00**	**1950·00**	**650·00**
B	POSTS AND TELEGRAPHS (TELECOMS BRANCH).	**102·19**	**76·48**	**45·15**	**30·53**	**37·36**	**29·43**	**64·88**	**49·24**	**250·08**	**185·68**
1	Automatization of Rangoon Telephone System.	17·00	17·00	...	...	...	...	...	...	17·00	17·00
2	Carrier Telephone and Telegraph systems	14·68	13·34	...	...	...	...	...	...	14·68	13·34
3	Construction of new Trunk lines ...	41·76	27·84	31·30	20·87	19·17	12·78	24·99	17·49	117·22	78·98
4	Rehabilitation of old Trunk lines ...	6·00	4·00	3·00	2·00	3·00	2·00	...	...	12·00	8·00
5	Improvement of Town Telephone system	4·22	...	1·58	...	...	...	20·00*	15.00	25·80	15·00
6	Installation of New Telegraph Equipment	4·07	2·71	...	...	...	...	6·07	4.55	10·14	7·26
7	Internal and External (HF Radio communication system).	13·95	11·50	6·25	4·80	...	...	...	...	20·20	16·30
8	U.H.F./V.H.F. Radio Telephone and Telegraph Communication system.	...	...	2·25	2·20	14·50	13·50	13·30	12.20	30·05	27·90
9	Systematic Organisation of Radio Regulatory Bureau.	0·51	0·09	0·77	0·66	1·19	1·15	0·52	...	2·99	1·90
C	POSTS AND TELEGRAPHS (POSTAL BRANCH).†	**0·90**	**0·55**	**0·54**	**0·25**	...	...	...	...	**1·44**	**0·80**
	Purchase of Motor Vehicles	0·90	0·55	0·54	0·25	...	...	...	...	1·44	0·80

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* Provision for Automatizatio Mandalay Telephone System.

† Excludes provision for buildings which is shown under N.H.B.

CHAPTER XIV

SOCIAL SERVICES

A. EDUCATION

1. The Education Plan consists of a twelve-point programme to effect the consolidation of gains achieved during the previous plan, the quantitative expansion of facilities and services and the qualitative improvement of education. The main features of the Plan are the expansion of facilities for compulsory primary education, the consequential expansion and further provision of secondary educational facilities on account of the expansion of primary education, and with a view to introduce free and adequate secondary education by 1977, the provision of increased facilities and better preparation for vocational education, and the improvement of the supply and qualification of teachers.

Primary Education

2. During the Plan period further steps will be taken towards the progressive provision of compulsory primary education. This is part of the Eight-Year Programme to introduce compulsory primary education throughout the country. However, lack of adequate data to implement fully the Plan will require a research programme which will include the collection of demographic data and the conduct of an educational survey to determine the number and location of primary schools, the areas which the schools will serve, the requirements of teachers and training schools to produce these teachers, and financial estimates of costs. The analyses of the data and the results of the educational survey may indicate need to amend the present Compulsory Educational Act.

Based on census estimates and the rate of increase of total population, it is estimated that 10 per cent of the total population will be children attending primary schools. At the rate of one school for one hundred children a programme of equitable distribution of schools has been drawn up. According to this programme, 3,014 primary schools will need to be opened during the Plan period 1961—65. On an average, new primary schools should be established at the rate of 750 per year. At this rate there will be 14,579 primary schools open at the end of the Plan period. The programme aims to provide one primary school in each village-tract presently without any schools. Before completion of the educational survey, priority will be given according to the size of the village population.

3. In the progressive implementation of the programme for compulsory primary education, it will be necessary to arouse the interest of the public and to call for assistance from voluntary social organizations and local bodies for the establishment and development of community schools. Up to now, the overwhelming burden of providing furniture and buildings for primary schools have been borne by Government. But with the increasing number of primary schools required, it is only proper that the community assumes a share of the burden. Local councils and voluntary organizations will be stimulated and encouraged to greater effort in the establishment of community schools. During the Pyidawtha period local communities contributed generously with money and labour for the provision of schools.

4. In the previous plan an intensive programme of construction of school buildings outstripped the capacity to provide teachers. As a consequence there were many school buildings with pupils but without teachers. Under the present plan, with the formulation of the principle "teachers first, school buildings next" measures will be introduced to achieve the necessary supply of teachers and to improve the qualifications of primary school teachers. At present, there are 11,542 unqualified teachers in the primary schools. A

training programme will be developed to enable 2,000 teachers a year to attend a one-year training course. Arrangements will be made to train additional 6,028 teachers for the 3,014 new primary schools which represent an average of two teachers for each school. The Six State Training Institutes can undertake the re-training of in-service primary school teachers but for the new recruits, additional facilities will be required. Five new training schools each accommodating 300 students will be required. For this purpose it is proposed to construct new buildings in towns where there is yet no high school. The training programme for additional primary teachers would be a short-term programme since the existing facilities slightly expanded should be able to accommodate the number of trainees required after the completion of the crash programme. Therefore, after the temporary training programme has been completed, the buildings will be converted into high schools.

5. The growing number of primary and secondary schools has posed a problem of administration due to the insufficiency of school-inspectors. With the increase of primary schools, more inspectors will be required. It is proposed to induct 159 additional inspectors during the Plan period.

Secondary and University Education

6. The necessity to increase provision of facilities for secondary education will follow as a natural sequence of the expansion of primary schools. It is also proposed to introduce free and adequate secondary education by 1977. In 1960, there were 520 middle schools and 273 high schools catering for 118,000 pupils. Due to lack of accommodation 45 schools out of 273 high schools were employed on the double-shift system. This system poses psychological problems for the pupils especially those reaching the age of adolescent. The long idle daylight hours out of schools have adversely affected the conduct and character of these children. To utilize their energies for constructive purposes the schools will have to return to the normal single shift. Remedies will be made for high schools with combined middle departments by separating the middle departments or by upgrading a near-by primary school into a middle school. A special survey of the existing problem will be made and further concrete steps for improvement will be taken.

7. As it is impossible to establish secondary schools in every town and village to meet the increased need the programme will be to upgrade some primary schools to middle schools and middle schools to high shcools at places accessible to easy transportation. Overlapping of school areas will be avoided. It is proposed to open one middle school for every 15 primary schools to maintain a ratio of 1:15. This will mean the establishment of 40 additional high schools and 238 middle schools to bring the number of high schools to 313 and middle schools to 758 at the end of the Plan period.

8. Secondary schools require experienced and trained headmasters and qualified senior assistants. In June 1960, there were 1,725 senior assistant teachers of which 1,479 were unqualified. This represented 85 per cent of the total teachers. Arrangements will be made for 206 graduate teachers to attend teachers' training courses on deputation terms at the rate of 60 teachers a year. Five hundred and nineteen under-graduate teachers will be re-trained at the rate of 100 teachers a year on study leave. Efficiency tests will be offered to the remaining teachers who have not passed the Intermediate University Examination and the status of those who have rendered long service will be determined.

9. In order to prepare realistically a large number of Burmese youths for immediate productive capacity and to reduce the pressure on academic type centres of higher learning there will be brought about a revision in the direction of the school programme. The ability and aptitude of secondary school students during their diagnostic years will be studied

and follow-up measures will be provided to enable them to follow their natural bent and inclination. At present there are five agricultural schools, three industrial schools, four artisan training centres, one handicraft school, six teacher's training schools, and thirty-four commercial schools. One hundred and forty secondary schools provide subjects with a vocational bias. Additional vocational schools will be opened and, in special, facilities for agricultural education will be expanded. It is proposed to tie-in attendance at these schools with various benefits. For a cultivator family one of whose members has graduated from an agricultural high school and who has returned to work on the land there will be offered increased agricultural loans, improved seed and fertilisers.

10. Other programmes include provision of more scholarships the improvement of school discipline for achievement of orderly school community, measures for improvement in the setting and marking of examination papers, and the teaching and practice of concept and processes of democracy in schools and teachers' training institutes.

Capital Expenditure Programme

11. *Directorate of Education.*—The capital expenditure programme under the Four-Year Plan provides facilities for compulsory primary education and training of teachers which is part of the Eight-Year Programme. Plans also include for the expansion of technical education and improvement of science education in the Middle and High Schools.

Funds are provided for construction of teachers training schools and high schools including agricultural, technical and vocational schools. Provisions are made for school furniture and equipment such as science apparatus, sports equipment, art equipment, books, duplicators and typewriters. The expenditure also covers implementation of new projects for further improvement of the Educational programme.

Universities

12. The Four-Year Plan provides K 109·00 lakhs for grants to the Rangoon University and K 78·00 lakhs to the Mandalay University. This will be used to continue the construction of college buildings at Moulmein, Bassein, Kyaukpyu, Magwe, and Rangoon and Mandalay Universities. Provisions include the construction cost of buildings for the new colleges at Myitkyina and Taunggyi.

Technical Education

13. During the previous four years rapid expansion was effected in the programme of establishment of technical education facilities to meet the needs of the country. At present the annual production of technical man-power is as follows:—

TABLE 96.—*Annual Production of Technicians*

1. Sub-professional engineer (technicians, foreman, supervisors, etc.).	Government Technical Institutes, Insein and Mandalay, and Engineering Technology Evening Classes, Rangoon.	180 40
2. Artisans, Grade 2 skilled workmen	Artisan Training Centres, Rangoon and Mandalay.	120
3. Engineering Apprentices, semi-skilled workmen.	Technical High School, Rangoon	120
4. Handicraft Workers	Handicraft School, Rangoon ...	50
5. Graduate engineers	University of Rangoon ...	150

Since there is no proper man-power survey, it is not known to what extent the above production rate has met the needs of the country. The Plan proposes to complete the projects which were embodied in the previous plans but which have not yet been fully implemented. When completed the facilities available will produce yearly—

TABLE 97.—*Estimated Number of Technicians Available Annually after Completion of Projects*

Sub-professional Engineers	500
Artisans	240
Engineering Apprentices and semi-skilled workers with basic technical education background	400
Handicraft Workers	100

14. It is proposed to change the two-year course at the Technical High School, Rangoon, into a three-year course. A new building is planned for the Artisan Training Centre, Rangoon. It is also proposed to change the two-year course at this Centre into a three-year course. The building facilities of the Artisan Training Centre, Mandalay, will be expanded. The Government Technical Institute, Mandalay, will be rehoused on a new site already acquired. The Technical High School, Mandalay, will be established in the existing building utilizing the equipment facilities of the Mandalay Government Technical Institute. The Engineering evening classes will be attached to the Technical Institute at Insein and Mandalay.

15. To provide a greater outturn of artisans and craftsman, it will be necessary to increase the admissions at the Artisan Training Centre, Rangoon. More stipends and scholarships should be offered. Teachers at the Centre should be upgraded. To enable the students to take advantage of technical literature available in English the teaching of that language should be improved.

Capital Expenditure Programme

16. *Directorate of Technical Education.*—The capital expenditure programme includes the creation of additional facilities for the technical institutes, technical schools and artisan training centres.

Under the Plan, allocations are made for construction of new buildings for the Artisan Training Centre, Mandalay, and construction of class rooms, hostels, workshop and staff quarters on a new site for Technical Institute, Mandalay. Expenditure has been provided to change the two-year course into a three-year course at the Technical High School, Rangoon, and to establish a Technical High School at Mandalay.

Training Programmes and Man-power

17. Many governmental organizations have set up in-service training programmes to meet their needs of skilled personnel. The IWTB conducts the following classes:—

1. Crews training classes.
2. Diesel training centre.
3. Marine cadets.
4. Trained apprentices.
5. Mechanic training classes.

Out of the above five classes, the Diesel Training Centre is the most important. It was opened under the auspices of the ILO in 1955. It provides training facilities for the countries of South and South-East Asia and students from these countries attend the Centre. The Government has now assumed full responsibility for the Centre with effect from 1960.

18. The Highway Department, the Irrigation Department, the Burma Railways, the National Housing Board, the Ministry of Defence and the Rehabilitation Brigade also conduct training classes for technicians to meet their own specific needs. The courses offered and the facilities provided at these institutions should be co-ordinated and expanded in a comprehensive programme to meet the country's needs which would increase with the progressive implementation of the Plan. It is especially important to view the problem of technical training in the perspective of long-term requirements. Steps will be taken during the present Plan period to meet requirements which will make themselves felt only in the next Plan period. Training consumes time and therefore it is necessary to take measures well in advance of anticipated requirements.

19. The lack of man-power survey is being increasingly felt. The country-wide census which is planned for 1963 should provide certain information on the man-power resources and needs of the country. However, man-power analysis requires specific rather than general data. Census authorities will keep this in mind when designing and preparing the census questionnaire. The present deficiency will be remedied by indentifying in the Government an agency responsible for man-power policy.

20. The report on the Technical Agricultural and Vocational Education Committee of 1955 includes projected requirements of skilled man-power up to 1960. A review will be made of the progress made in the implementation of this Report.

21. In the provisions for training, maximum advantage will be taken of the facilities offered by countries under the Colombo Plan, the United Nations and by various philanthropic foundations. There will be more effective utilization of experts under various technical assistance schemes. The foreign technical assistance programme will be better co-ordinated with the development programmes.

Scientific Research

22. Scientific research conducted at present comprises academic research in the University, applied research for the setting up of new industries and the improvement of existing ones by the Union of Burma Applied Research Institute under the Ministry of Industry and agricultural, veterinary and forestry research under the Ministry of Agriculture and Forests.

23. The academic research is carried out mainly by the post-graduate students working on their thesis in the Departments of Physics, Chemistry, Botany and Zoology of the University of Rangoon and would be extended into other fields of science and engineering. The academic research though carried out mainly to satisfy the thesis requirements of the University has potential usefulness to the country when the subjects investigated are of importance to the economic development of the country.

24. The Union of Burma Applied Research Institute, Kanbe, under the guidance of the Burma Research Council and the administration of the Burma Research Board of the Ministry of Industry is conducting research in the fields of Applied Chemistry and Chemical Pilot Plants, Food Technology, Pharmaceuticals, Cellulose and Paper, Ceramics, Metallurgy, Physics and Engineering for the establishment of new industries and providing technical

service to Government ministries, departments, factories, boards and corporations and to private industrialists and prospectors for the fabrication, repair and calibration of scientific instruments, the chemical analysis of minerals and other samples, provision of technical information and the utilization of atomic energy in the Union of Burma.

25. Under the Ministry of Agriculture and Forests the organization of research is as follows. Agricultural research is carried out at 9 Agricultural Research Farms in different parts of Burma and at the Agriculture Research Institute, Gyogon, under the Directorate of Agriculture. The research programmes have the four objectives of Improved Production of Crops, Eradication of Plant Diseases, Prevention of Insect Pests, and Laboratory Analysis. Veterinary research is conducted in the Veterinary Research Laboratory, Insein, under the Directorate of Civil Veterinary Services. The work consists of production of various kinds of preventive vaccines, research on animal diseases prevalent in the Union of Burma and investigation of suitable animal fodders which would provide adequate nutrition to draught animals. Forestry Research is carried out by the Forest Department in its Research and Training Circle and a Wood Biology Laboratory is being established. The Projects include research on the growing of trees, collection of indigenous and exotic seeds which has so far resulted in 58 indigenous varieties and 29 exotic varieties being collected, herbarium, publication of lists of trees and vines, collection of statistics and model demonstrations of charcoal production in the maritime regions.

26. The key to progress is research for it can open the door to increased national production and to the greater utilization of natural raw materials. For instance, the Union has one of the world's largest reserves of bamboo forests sufficient to supply the whole region with its requirements of cellulose pulp according to a recent ECAFE survey. Yet, with the exception of a few bamboo fishing rods, no export of bamboo products such as pulp or paper is at present being made. Research leading to the setting up of large and small bamboo pulping plants would result in a large increase in the national income as both the raw material resources and the market allow for a kyats fifty crores per annum industry.

27. Research is needed not only for the establishment of new industries but also for the improvement of existing industries (including agriculture) to compete profitably in the dynamic market conditions of today when new, better and cheaper products are continually being put on sale. As a matter of fact, the research problems of existing industries are often more numerous and difficult than that of new industries. That is why the more developed a country is, the more it spends on scientific and technological research.

28. In the case of the Union, which still has a long way to go towards balanced industrialisation, it is extremely important for the Government to have adequate research facilities to provide data and consultation for a properly planned industrialisation programme. As in all underdeveloped countries there is not enough capital to set up all the modern industries at once. So there must be continuing investigation of the local conditions such as availability of raw materials, markets, and technical feasibility for the selection of the most suitable industries to be initiated by Government or allowed in the private sector in order to utilize the available capital in the most promising way. Hand in hand with such investigations will have to proceed experiments on the scientific testing of local raw materials for the technical process proposed to obtain data on the economics of the proposed industries. In the light of these data, further experiments will be required to modify or adapt the processes to local conditions. These experiments may be fairly simple or they may be sufficiently complex and far reaching to result in a significantly new process to warrant it being called an invention.

29. Applied research which is being carried out at this point of time when resources can ill be spared should be directed in all cases towards the achievement of practical results which will make a direct contribution towards the development effort.

The programme for the Union of Burma Atomic Energy Centre consists of prospecting and exploration of uranium and thorium deposits in the country, mineral testing for the profitable mining and production of uranium and thorium, personnel protection service by the health physics group to all persons working with atomic radiations (including the X-Ray personnel in the hospitals) nucleonic instrumentation research, study of reactors radiochemical work and expansion of the utilization of radioisotopic techniques in agriculture, geology, industry and medicine.

30. The programme of applied research for the next four years covers in addition the following subjects of importance to the economic development of the Union. Research on the properties of cellulose pulp using mixed bamboo of different species and ages as found in typical Burmese forests, testing of other celluloic raw materials available in the country such as *kaing* grass, woods, straw, jute, etc.; hydropulping of shredded bamboo to achieve low-chemical pulping so as to reduce cost ; testing of new processes to produce newsprint pulp from Burmese raw materials ; investigation of the Burmese ores for the production of iron and steel, the production of electrolytic manganese dioxied, the production of white lead and other pigments, the production of magnesia from bittern (wastes from the local salt industries) ; research on the utilization of solar energy for refrigeration (this being an appropraite combination as refrigeration is most required when the sun shines the most) ; transistor radios, and instruments, wind-power for pumping water for irrigation to increase the agricultural production ; development of small-scale industries such as Rice-Bran Oil Extraction and Refining at the rice mills themselves to eliminate the rapid rancidity of the rice-bran, cottage scale manufacture of light weight clay roofing tiles to eliminate the devastating fires amongst the closely spaced huts, testing of Burmese raw materials for the manufacture of glass and ceramics, pharmaceuticals research and investigation of indigenous medicines, production of consumer goods from local raw materials through chemical processing, setting of modern hygenic food industries, standardization of local industrial products such as textiles, cosmetics and oils to improve quality control and compete successfully with imported goods ; introduction of new strains of crops to obtain better yields, studies of various types of fertilisers, testing of paddy grown from irradiated seeds to select desirable mutations and research on forest products. In addition, technical services would be provided for solving the industrial, mining and agricultural problems too numerous to mention.

31. With the advance of science and technology, scientific research is a necessity in any independent country and has to be carried out with essential instruments and adequate facilities. The Four-Year Plan makes provision for these essential needs of research work which is to yield results of great value to the country.

32. Applied research which is being conducted at this point of time when resources can ill be spared should be directed towards the achievement of practical results which will make a direct contribution towards development. Government will study the need for a National Scientific Research Council to co-ordinate research activities in all fields, formulate a national research programme and to allocate resources.

B. HEALTH

33. The aim of the Health Plan is to strengthen existing services, to develop them to bring them increasingly within the reach of all the people and to further improve the national health. To this end the Ministry of Health will undertake programmes to—

(*a*) provide adequate medical and para-medical personnel to operate existing and expanded services ;
(*b*) increased facilities, accommodation and supplies ;
(*c*) conduct measures for the prevention and control of communicable diseases ; and
(*d*) improve health conditions in the environments.

34. There are at present 183 hospitals and 43 dispensaries in the country. Many of these are short-staffed and the following appointments should be made to remedy the deficiency.

TABLE 98.—*Number of Appointments Required*

Ranks	Sanctioned Appointment	Present Appointment	Additional Appointment
1. Civil Surgeons	41	41	...
2. Assistant Surgeons ...	308	222	86
3. Sub-Assistant Surgeons ...	283	129	154

When the Four-Year Plan was drawn up the Project for contracting foreign doctors was not included but due to scarcity of doctors in the country a proposal to contract foreign doctors from India for the post of Sub-Assistant Surgeons was made by the Ministry of Health and approved by Government on November 8, 1960. It has been decided to contract 104 doctors on 3 years' contract. It has also been decided to revive the L.M.P courses.

35. Many hospitals are at present being housed in hired buildings which are not really suited to the purpose. To replace these with proper buildings and to rehabilitate old ones it will be necessary to construct the following number of hospitals of all sizes :—

TABLE 99.—*Construction of Hospitals*

Year		*No. of Hospitals*
1961-62	...	43
1962-63	...	52
1963-64	...	30
1964-65	...	31

36. With modern medical methods requiring increasing specialisation it has become necessary to create a specialist cadre. There are 51 posts for specialists in the Rangoon General Hospital, the Mandalay General Hospital and Dufferin Hospital and Regional Hospitals at Akyab, Moulmein and Bassein. Senior specialists will be appointed from among doctors who hold F.R.C.S., M.R.C.S. and M.R.C.O.G. Fellowships and Memberships and have at least ten years' experience.

37. District Health Officers and Assistants are given sole charge of Functioning Rural Health Centres and of Supervising Epidemic Control Teams. The appointment of 31 Assistant District Health Officers during the Plan period has been sanctioned. An additional 12 District Health Officers and 12 Public Health Nurses will be required during the Plan period.

38. It is planned to set-up 800 Rural Health Centres to provide medical services to the rural population which constitutes 85 per cent of the total population. At the end of 1960-61 there will be 505 Centres established. It is proposed to open an additional 300 centres during the Plan period. Each Rural Health Centre should have one Health Assistant, one Lady Health Visitor and five Midwives and one Vaccinator. Additional staff required are as shown below :—

TABLE 100.—*Additional appointment required by the Rural Health*

Year (1)		R.H.C. (2)	Health Assistants (3)	Lady Health Visitors (4)	Midwives (5)	Vaccinators (6)
Present Appointment	...	408	405	183	904	347
1960-61 ...	...	97	100	50	460	...
1961-62 ...	...	...	...	50	300	158
1962-63 ...	...	100	150	50	300	100
1963-64 ...	...	...	...	50	300	...
1964-65 ...	...	100	150	100	300	100
Total by the end of 4-Year Plan		705	805	483	2,564	705

39. Out of the Rural Health Centres presently opened only 138 are housed in buildings of their own. All available suitable buildings will be used to house the additional centres which will be opened during the Plan period, it is estimated that 350 new buildings will need to be constructed.

40. For the rehabilitation of hospitals and dispensaries the Government took over control in 1952 of such facilities from local bodies. Additionally the Government has also established new district, township and emergency hospitals in accordance with population and transportation accessibility. To make adequate the services provided by these hospitals a large number of para-medical personnel are required.

TABLE 101.—*Appointment of Para-Medical Personnel*

Sr. No. (1)	Rank (2)			1961-62 (3)	1962-63 (4)	1963-64 (5)	1964-65 (6)
1	Sister Superintendent	...	...	3	10	10	11
2	Sisters ...	...	...	4	8	8	8
3	Staff Nurse ...	...	...	13	35	35	35
4	Nurses ...	...	...	50	130	130	128
5	Compounder ...	...	...	...	20	19	19
6	Laboratory Technician	...	...	...	8	8	8
7	Laboratory Assistant	...	...	...	18	17	17
8	Dental Technician *	...	...	...	4	4	4
9	Dental Assistant	...	...	...	7	7	7
10	X-Ray Technician †	...	...	...	...	...	...
11	Physiotherapist	...	...	...	15	15	31

* Since Dental Technicians are not available Dentist (350—25—700) will be appointed.

† Since the programme for training X-Ray Technicians are still under implementation, estimates of appointments are not available.

The School of Physiotherapy in the Rangoon General Hospital was opened on 7th November 1960 and is providing two years full-time training for Intermediate of Science students. Fifteen Government sponsored students are undergoing training and will qualify in November 1962. Apart from the Rangoon and Mandalay General Hospitals all Civil Hospitals having an available bed strength of 100 beds and above should have physiotherapy service.

The total number of Physiotherapists required are as follows:—

Table 102.—*Number of Physiotherapists Required for*

Rangoon General Hospital ...	15
Mandalay General Hospital ...	6
Taunggyi Hospital	2
Three 200—280-bedded Hospitals...	9
Two 120—200-bedded Hospitals ...	4
Three 150-bedded Hospitals ...	3
Three 125-bedded Hospitals ...	3
One 100—140-bedded Hospital ...	1
Twelve 100-bedded Hospitals ...	12
Total ...	55

Provision have also been made for purchase of medical equipment.

41. *Rangoon General Hospital.*—It is also planned to modernize the Rangoon General Hospital so as to provide an adequate number of beds, doctors, medicines and equipment according to the number of patients. During the Plan period it is required to appoint 17 additional Assistant Surgeons since 15 Assistant Surgeons are on deputation abroad. The Rangoon General Hospital Temporary Emergency Advisory Committee have recommended to increase the number of House Surgeons from 58 to 80. The Rangoon General Hospital which can accommodate 500 patients is having to accommodate 1,700 patients. In foreign countries 2 patients receive the attendance of one nurse but at present the ratio is 18 patients to one nurse. To be able to give one nurse to 6 patients, it is necessary to appoint 2 Assistant Nursing Superintendents, 17 Sisters, 25 Staff Nurses and 250 Nurses during the Plan period. Provisions have been made for procurement of equipment for Cancer treatment and Radiotherapy.

42. *Maternity and Child Health.*—The maternity and child health project was started in 1951-52. The programme was to open 500 Maternal and Child Health Centres but only 345 have been opened to which 137 have been sanctioned by the Government. For each Maternity and Child Health Centre one Lady Health Visitor and two Midwives are required. The UNICEF also provides drugs, milk powder, fish oil, soap and other supplies.

The Child Health Department was also established in 1951-52. The objective is to establish health departments in schools to examine and give treatment to children from age

5—16 years. Five Health Departments in Rangoon, seven Health Departments in Mandalay, Moulmein and Bassein have been opened.

TABLE 103.—*Number of Maternal and Child Health Centres*

Year.	*M.C.H.*	*C.H.D.*
Total opened ...	137	12
1961-62	20	6
1962-63	15	5
1963-64	15	5
1964-65	20	6
Total ...	207	34

43. It is necessary to have at least one Health Assistant in one Rural Health Centre. At present there are 412 Health Assistants of which 405 are appointed for the Rural Health Centres. By the end of the Four-Year Plan it is necessary to have at least 605 Health Assistants. It is estimated that 100 Health Assistants will graduate out of the 8th Group of Training which will commence from 1st January 1963. The 9th Group of Training will commence from 1st January 1965.

44. To have an adequate number of nurses for hospitals and dispensaries 478 nurses are required. It takes three years to train a nurse. Graduation of nurses during the Plan period is as below:—

TABLE 104.—*Number of Nurses to be graduated during the Plan Period*

Year.	*Graduation.*
1961-62 ...	150
1962-63 ...	177
1963-64 ...	...
1964-65 ...	100
Total ...	427

45. Four hundred and seventy-two additional Lady Health Visitors will be required. It takes nine months to train Lady Health Visitors. The training capacity is fifty persons per term. Graduation during the Plan are as below:—

TABLE 105.—*Number of Lady Health Visitors to be graduated during the Plan Period*

Year.	*Graduation.*
1961-62 ...	50
1962-63 ...	50
1963-64 ...	100
1964-65 ...	100
Total ...	300

46. It takes eighteen months to train a Midwife and only 300 can be trained in each term under the present capacity. Over 2,000 Midwives will be required during the Plan

period but it is expected that only 1,200 will graduate. To meet requirements it will be necessary to expand training facilities.

TABLE 106.—*Number of Midwives expected to graduate during the Plan Period*

Year		*Graduation*
1961-62	...	300
1962-63	...	300
1963-64	...	300
1964-65	...	300
Total	...	1,200

47. The Malaria eradication programme is being carried out by the Malaria Institute of Burma with the co-operation of WHO. Operations are being conducted in seven regions of Burma.

The Venereal Disease control programme was initiated in 1951. There are 25 Anti-VD Teams in Burma and the constituent States. Out of nearly 700,000 persons blood-tested, 170,000 needed treatment.

With the co-operation of WHO/UNICEF an intensive Leprosy control programme has been launched. Of 56,000 persons given modern treatment in 1960 over 5,000 were cured.

The Tuberculosis control project started in 1951-52 with the aid of WHO and UNICEF. A T.B. Clinic was opened in Rangoon in 1951 and at Mandalay in 1953. In 1954 an extension ward was opened in Rangoon General Hospital with 200 beds. A 20-bedded ward was also opened at Mandalay. An additional TB Clinic was opened in Rangoon during 1960. Ten mobile BCG teams are in operation.

There are ten teams operating for the control of epidemics such as plague, cholera and small-pox. In addition an Epidemiologist has been appointed to study the causes of outbreak of epidemics.

The project for the control of Elephantiasis was initiated in December 1959. It is being conducted with the co-operation of WHO, UNICEF, and the Rangoon Municipal Corporation.

During the Plan period the operations of these programmes will be strengthened.

48. To revive indigenous system of medicine the project for promotion of Indigenous Medicine was started in 1952-53. The Sesaya Act and Rules have been drawn up. Up to 1960 over 18,000 Burmese Sesayas have been registered and 18 free dispensaries established. Course syllabuses for training in Burmese medicine have been drawn up. The Plan envisages the opening of 133 free dispensaries and the establishment of schools and hospitals of medicine at Rangoon and Mandalay.

49. For the systematic collection and compilation of vital health statistics a first-stage pilot scheme was introduced during 1960-61. During the Plan period the scheme will be expanded to cover 72 municipal towns and 177 small towns. Towards the end of the period the scheme will be introduced in rural towns.

50. Other health programmes include construction of hospitals, mental institutes, dental care, nutrition, medical social service, environmental sanitation and sports activities of the National Fitness Council.

51. *Capital Expenditure Programme.*—The total capital outlay on Health under the Plan totalled K 30·95 million. The capital programme consists of construction of 200-bedded hospital and one children hospital at Rangoon, extension of Rangoon General Hospital, Dufferin Hospital, Central Medical Stores and procurement of medical equipment and supplies for public health programme. The total allocated capital outlay excludes provision for the construction of hospitals and other constructional facilities in districts for which provision will be made under the Standing Divisional Buildings Construction Committee's Fund.

C. SOCIAL SERVICES

52. Government Social Policy, which is one of the major concerns of the Plan, aims at Social advancement in the country, the answer to which can come only when each citizen becomes aware of his duties, some required by law, but many silently dictated by his own conscience. Hence Social Welfare aims at a broad programme of popular education for the people to enable them to—

(*a*) understand the problems of the environment,
(*b*) appreciate their rights and duties as citizens and individuals,
(*c*) acquire a store of knowledge and skill for the progressive improvement of their living conditions, and
(*d*) participate more effectively in the social and economic development of the community.

The Plan includes the following programmes :—

(1) Community Development and Social Work Training.
(2) Family and Child Welfare.
(3) Rehabilitation of the handicapped.
(4) Social Defence.
(5) Adult Education.

53. *Community Development Scheme.*—The Community Development Programme includes recreational activities, cultural activities and adult education activities in family life improvement. These activities will be promoted through Community Centres both in Rural and Urban Areas in co-operation with Voluntary Organizations and allied Government Department.

54. *Social Welfare Training Centres.* —As more services are given in the Community Development programme, it is required to train 50 persons yearly. Special training courses will also be given to members of Government Departments, Boards and Corporations and seminars and discussions will be held from time to time. To undertake the programme successfully, Social Welfare Training Centres for at least 2,500 voluntary leaders are to be opened in 88 townships.

55. *Monastic Education.*—With a view to promoting education in rural areas, every encouragement will be given to monastic schools. There are 6,400 registered monastic schools. Under the Plan it is proposed to supply prescribed books, stationery and equipment. For better education, seminars of *Sayadaws* are to be held in suitable places and different volumes of Encyclopaedia Burmanica are to be supplied yearly.

56. *Family and Child Welfare.*—The care and protection of mothers and children are the main concern of Social Policy. There are cases of infants being abandoned or neglected because of the loss of one or both parents, mothers looking for employment, working mothers or seriously ailing mothers. To solve these problems it is planned to undertake —

(1) Day Nursery Work.
(2) Legal Adoption.
(3) Rehabilitation of handicapped children.
(4) Provision of homes for waifs and strays, according to age, in voluntary associations and Child Health Centres.

57. *Day Nursery Work.*—There are already established Day Nursery Centres in Pazundaung, Bahan, Yankin, Sanchaung and Kemmendine providing for 400 children. Three more centres are to be opened in North and South Okkalapa and Thaketa during 1960-61, and two more in industrial areas in Rangoon during 1962-63 and 1963-64. The Plan also includes provision for contributions to other Day Nurseries run by Voluntary Agencies outside Rangoon.

58. *Legal Adoption.* —In order to carry out the services systematically, the Directorate of Social Welfare co-ordinates with Government Health Centres and Maternity and Child Health Centres for legal adoption of children. To give every satisfaction to all parties concerned Social Workers prepare and advise both parents before actual adoption.

59. *Rehabilitation of the handicapped.*—The programme is to give monetary contributions and effective services to blind, deaf and dumb schools and centres for rehabilitation of crippled children.

Veterans Rehabilitation Programme was established in September 1955. It is to provide medical treatment and training for veterans to enable them to secure private employment and become self-supporting. At present there are 75 veterans under medical treatment and it is planned to increase facilities to accommodate 100—150 veterans after four years' time. The Programme is to provide—

(1) medical treatment to disabled veterans without families, *i.e.*, by Physiotherapy and Occupational Therapy,
(2) artificial Limbs, and
(3) training in such field as carpentry, sewing, hair cutting, typing, operating machines and farming.

60. *Residential Nurseries.*—Since 1952, the Directorate of Social Welfare has taken the responsibility of looking after these waifs and strays but proper accommodation cannot yet be provided. When His Majesty Haile Salassie, the Emperor of Ethiopia visited Burma, he donated K 60,000 towards the building fund and Government during 1960-61 also sanctioned K 90,000 for the construction of the building. The building is to be set up at Chawdwingon and work on survey and design has been completed.

61. *Social Defence.*—As restoration of law and order is one of the main objectives of the Plan, social defence contributes to that Plan by giving serious attention to the problem of juvenile delinquency. Social Welfare Childrens' Guidance Centre is co-operating with Juvenile Courts in Hanthawaddy, Insein and Rangoon Districts and Child Health Centres in solving the problems of juvenile delinquency. The Children Act is to be further extended to Mandalay in 1961-62, Moulmein in 1962-63 and Prome in 1963-64. Additional facilities such as Children's Home and Probation Offices will be opened together with the Juvenile Courts.

Social defence is also concerned with the care and protection of homeless women, rehabilitation of those detained under the Prevention of Immoral Traffic Act and those looking for employment. Women sentenced to imprisonment are sent to Approved Home where they are taught vocations and are given a healthier life.

62. *Rehabilitation of traditional beggars.*—The programme of rehabilitation of traditional beggars will be further strengthened by the introduction of a Bill in Parliament during the Plan period.

63. *Aid to Welfare Institutions.*—The Department has made provisions in the Four-Year Plan to give more aid to institutions caring for oprhans, aged, destitute and handicapped persons under the auspices of Voluntary Organizations.

D. OTHER SERVICES

64. *Rural Sanitation and Water Supply Board.*—The Rural Sanitation and Water Supply Board was established in May 1953 to undertake the supply of clean, fresh and abundant water and to introduce sanitary measures in rural areas. Under the Plan the Board will give priority to water supply projects in Dry Zone areas, *viz.*, Lower Chindwin, Sagaing, Shwebo, Myingyan, Magwe, Pakokku, Kyaukse, Meiktila, Yamethin and Thayet Districts. The programme also includes drilling and renovation of tube wells and piping of water from streams, springs and rivers, of which piping of water from Kyaukpyauk to Ayadaw and 15 villages is one of the main projects. The estimated cost under Four-Year Plan for the above projects is K 68 lakhs. The Plan target of operation is as follows:

TABLE 107.—*Target of Operation by the end of the Plan Period*

Name of Project.	*No.*
1. Tubewells	1,500
2. Piping of water from rivers, streams and springs ...	14
3. Piping of water from Kyaukpyauk to Ayadaw and 15 villages	1

65. *Directorate of Fire Services.*—Since many of the dwellings in the country are hutments constructed with combustible material such as bamboo, grass or wood it is highly important to take rigorous preventive measures against fire. In the past few years a series of big fires caused loss of much property and wealth that the country could ill-afford. The Fire Department proposes to expand their preventive and operational services to more towns. More fire engines will be brought into service and the efficiency and welfare of firemen improved. Voluntary firemen will be utilized more effectively through better training and operational programmes. Under the Four-Year Plan K 55·72 lakhs is provided for the procurement of fire engines, equipment and four numbers of motor vehicles. The Plan includes distribution of one fire engine each to 30 towns in the first two years and to 25 towns in the latter two years.

66. *The Union Insurance Board* came into existence under the Union Insurance Board Act of 1950, and covers under the Compulsory Life Assurance Scheme became effective from 1st March 1953. The Board has a coverage of 60,000 Government Employees and 20,000 members of the public up to date. Through a net work of commissioned agents, it covers almost the whole country. All policy moneys are guaranteed by the Government under section 26 of the Union Insurance Board Act. Since April 1957 the Board covers general business, fire, marine, motor, fidelity guarantee, miscellaneous accidents including aviation,

hull, personal accident and air travel insurances. Total investment of the Board's funds amounts to over K 470 lakhs. The Four-Year Plan provides K 102·49 lakhs for construction of office building, procurement of motor vehicles and implementation of Hire-Purchase Building Loans Scheme.

67. *Social Security Board.*—The Social Security Board came into operation in January 1956 under the Social Security Act passed in 1954. Under section 3 of the Act, the establishments included in the compulsory insurance scheme are industrial establishments, Union Railways, public industrial and transport establishments, ports, mines, oilfields and stevedoring establishments as defined in the respective Acts. The Act covers all establishments employing 10 or more workers. Under the Act, the employer is required to register his establishment. The Act lays upon the employer the duty of collecting employee's contributions and his contributions to Social Security Board. Sickness benefits, temporary disability benefits, maternity benefits, widows' pensions, orphans' pensions are classified according to injury, or according to the dependants or according to the disability of the injured worker.

The Four-Year Plan provides K 8·40 lakhs for purchase of ambulances and equipment for the agency.

68. *Rangoon Corporation.*—Total contribution to Rangoon Corporation under the Four-Year Plan amounts to K 210·00 lakhs. Works to be carried out within the four years are:—

(*a*) Construction of roads and buildings.
(*b*) Expansion of Rangoon Sewerage System.
(*c*) Filaria campaign and Anti-mosquito campaign, purchase of rubbish lorries and meat vans, and installation of Incinerator for Health purposes.
(*d*) Purchase of a fire float from U.K. for Central Fire Brigade.

69. *Union of Burma Purchase Board.*—The capital programme includes construction of Storage godowns for which K 5·14 lakhs is provided under the plan.

70. *Civil Supplies Management Board.*—The Four-Year Plan provides K 37·00 lakhs for construction of godowns for storage facilities.

71. *Union Culture.*—The capital programme for the Union Culture constitutes the construction of museum and library buildings at ancient towns of historical importance. Besides, a theatre, library and museum with modern design will be built at Rangoon. All construction works will be undertaken by the National Housing Board. A sum of K 53·50 lakhs is provided for all the building construction works including furniture and equipments. The other programme includes excavation works, Ceramics, Numismatics, Funerary, Palalography works, ancient jewellery, history of Burmese Arts and Architecture, Sculpture, Painting, Carving and Craftsmanship. These works are scheduled during the Plan period so as to maintain and preserve the country's cultural prestige.

72. *Broadcasting Department.*—The Four-Year Plan provides K 5·57 lakhs for procurement and installation of R.C.A. type 10 K.W. transmitters in the Broadcasting Station.

73. *State Film Promotion Board.*—The Four-Year Plan provides K 10·00 lakhs for procurement of machinery and equipment for this agency.

74. *Government Printing and Stationery.*—The funds provided for the Government Printing and Stationery in the Four-Year Plan is to permit the procurement of printing machines for the efficient operation of Government printing works.

75. *State Pawnshop Board.*—K 12·00 lakhs is provided under the Four-Year Plan for State Pawnshop Board for the construction of office and pawnshop buildings.

76. *Union of Burma Stevedoring Board.*—Union of Burma Stevedoring Board came into existence in 1957. The functions of the Board are to stevedore goods especially those used by the S.A.M.B., A.R.D.C., S.T.B. and Union Purchase Board. With the increase in the exports and imports of the country, the work of the Board has expanded and the number of labourers used by the Board has increased. The labourers are supplied by the Dock Labour Board.

The Four-Year Programme includes construction of office building and procurement of equipment and trucks for which K 13·17 lakhs is provided under the Plan.

77. *International Institute for Advanced Buddhistic Studies.*—The Institute is, in fact, a religious as well as a cultural centre where hundreds of volumes of Buddhistic literature and rare manuscripts and Buddhist antiquities are properly maintained in their respective library and museum. With a view to promoting and spreading Buddhistic culture far and wide, the Institute provides the facilities of its library and museums to the foreign as well as local researchers and scholars in their Buddhistic studies. The present Four-Year Plan provides for the extension and improvement of the services rendered by the Institute's library and museum. The capital programme also includes for procurement of vehicles for departmental use.

78. *Foreign Office.*—The Foreign Service is the first line of defence in time of peace. This fact is being gradually realized and accepted. The need for a strong foreign service organization and adequate staff has long been felt. The present strength is not proportionate to the ever increasing volume and complex nature of work. Comparatively, it is very much below the minimum basic strength. As such, a programme of re-organization and expansion and intensive training are included in the present Plan. Under the proposed programme, the creation of new divisions with additional officers of calibre and staff, the establishment of Policy Planning, Financial Autonomy, a National Library and Archives are included.

During the Plan period, it is proposed to upgrade the following four Legations to the level of Embassies in Colombo, Paris, Bonn and Phnom Penh; two Consulates to Consulate-Generals in Singapore and Decca, and two Vice-Consulates to Consulates in Chittagong and Madras.

In addition, the proposal is to open a total of eleven new Burmese Embassies, two in South America, two in Africa and the rest in Asia and Europe. Four new Consulate-Generals will be established in such places as Hong Kong, San Francisco, etc. Eight Embassies will have military representatives.

The Foreign Office capital programme consist of construction and purchase of chanceries and residential buildings for Burmese diplomatic missions abroad and procurement of office equipment, supplies, and motor vehicles. A sum of K 18·14 million is provided in the Plan for these purposes.

79. *Zoological Department.*—Yearly provision of K 2·00 lakhs is made to the Zoological Department under the Four-Year Plan for repairs and renewal works of roads and buildings, dispensary and laboratory for Zoo animals, exhibits (animal, birds, reptiles and fishes), parks and gardens, and miscellaneous works such as essential office equipment, public services, amenities, publicity, etc.

E. HOUSING AND CONSTRUCTION

80. *National Housing Board.*—The war and the insurrections which followed in its wake, left a trail of destruction throughout the country and thousands of people were left without adequate housing. The National Housing Board was formed in 1951 to solve this pressing problem. It was charged with the duty of providing adequate housing and sanitary environment for the people and the development of towns and the countryside leading to a more healthful and prosperous life throughout the Union of Burma. It also constructs schools, hospitals, office buildings and all other types of buildings. In addition, it has to carry out constructional works on behalf of other agencies and departments. These are called Civil Works. The Board also accept works from Board and Corporations on a deposit basis.

81. *Housing Programmes.*—The housing activities of the Government under the Plan will be—

(*a*) Construction of buildings in Rangoon, and
(*b*) Construction of buildings in the Districts.

Total estimated cost for the Housing Project is K 119·56 lakhs.

82. *Rangoon Housing.*—The Plan provides for the construction of 22 new buildings in Rangoon. These will be constructed in such places at Lanmadaw, Link Road, and Yankin. Also included under this project is the Ananbin Village Scheme, for which K 23·00 lakhs provision is made.

TABLE 108.—*Rangoon Housing Construction during the four years*

	Nos.	(Total Estimated Cost)
Lanmadaw	8	K 24·00 lakhs.
Link road	6	K 15·00 ,,
Yankin	8	K 24·00 ,,
Total ...	22	K 63·00 ,,

83. *District Housing.*—Twelve buildings will be constructed at Mandalay during the four years at a total estimated cost of K 27·50 lakhs.

84. *Town Development.*—Under the Four-Year Plan the following constructions constitute the Town Development Project :—

(*a*) Rangoon Water Supply Project.
(*b*) Rangoon Sewerage System.
(*c*) District Water Supply.
(*d*) Town Water Supply.

Total provision for the Town Development is K 799·50 lakhs.

85. *Rangoon Water Supply.*—Shortage of water is one of the major problems confronting Rangoon at the present time. The present water supply is approximately 29 million gallons per day, or approximately 36 gallons *per capita* which is about 60 per cent of the required amount for minimun standards of sanitation, fire protection and industrial use. In addition to the basic short supply, the distribution system is generally in poor condition and large sections of the metropolitan area are completely without public water service. To overcome the present conditions two programmes are to be undertaken under the Four-Year Plan, *viz.*, the short-term programme and the long-term programme.

86. *Short-Term Programme.*—(i) Installation of New Pumps and Booster Stations to increase the 29 million gallons per day presently supplied from existing sources to 33 million gallons per day. This project was commenced in 1960-61 with a French firm DEGREMONT but will be carried into the Four-Year Plan.

(ii) Construction of an additional balancing reservoir of 10 million gallon capacity to meet peak demands, handle emergency interruptions of pumping operations and improve distribution.

(iii) Increase the amount of water supply available for consumption by an additional 3 million gallons per day by reduction of wasteful usage and losses through, leakage etc., in the present distribution system.

(iv) Further improve distribution by the installation of additional feeder and service mains to sections of the metropolitan area now completely without public water service.

To carry out the Short-Term Programme an agreement has been signed with I.C.A. for an assistance of U.S. $ 1,035,000. In addition to this amount K 38·66 lakhs is to be utilized out of P.L. 480 Kyat Fund and K 34·21* out of Government funds.

87. *Long-Term Programme.*—This programme includes development of new sources of water supply to increase the present supply and to meet future requirements. A total of K 310·00 lakhs is provided in the Plan and the breakdown is as below :—

TABLE 109.—*Expenditure for Long-Term Programme*

(In K Lakhs)

	1961-62	1962-63	1963-64	1964-65
Long-Term Programme—Water Supply	10·00	50·00	100·00	150·00

88. *Rangoon Sewerage System.*—Existing sanitary and sewerage facilities are almost 70 years old and have suffered considerably from war damage and lack of adequate maintenance. In many locations sewage overflows on to the streets due to clogged, broken or undersized sewers. Large Sections of the densely settled portions of Rangoon are entirely without sewers. While a major programme of sewer construction is required to remedy the unsatisfactory conditions presently existing in Rangoon, certain steps of lesser magnitude could be undertaken which would fit logically into the long-term programme, bringing about appreciable improvement and reducing the hazard to public health. Thus under the Four-Year Plan, the Rangoon Sewerage System Project will also be carried out under two programmes, *viz.*, the short-term and the long-term.

89. *Short-Term Programme.*—Under this programme it is proposed (*a*) to obtain more efficient utilization of the existing sewerage systems by cleaning, flushing, unblocking and repairing of the sewerage systems, manholes, house connections and broken sewer mains and to extend the sewerage system to densely settled areas in Rangoon not having such facilities to the extent that these can be accomplished with the existing sewerage system.

(*b*) To carry out engineering survey to design a comprehensive sanitary sewerage plan for the Rangoon metropolitan area.

Total cost estimated for this programme is K 38·79 lakhs.

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* Inclusive of K 5·84 lakhs for 1960-61.

90. *The Long-Term Programme.*—This programme is for the extension of sanitary sewerage systems to the remaining portions of the Rangoon general area not covered by the Short-Term Programme, K 110·00 lakhs provision is made in the Plan for this programme and the yearly provision is as follows:—

TABLE 110.—*Expenditure for Rangoon Sewerage*

(In K Lakhs)

	1961-62	1962-63	1963-64	1964-65
Long-Term Programme—Rangoon Sewerage	10·00	20·00	30·00	50·00

91. *District Water Supply.*—A total provision of K 221·00 lakhs is made in the Plan for survey and construction of water supply systems in Moulmein, Mandalay, Akyab, Prome and Magwe.

92. *Town Water Supply.*—Water supply works at Falam and improvement of water supply system at Mandalay will be carried out at a total estimated cost of K 3·50 lakhs.

93. *Economic Development Industries.*—A yearly provision of K 0.30 lakhs is made under the Plan for Industrial Research.

94. *Country Development in States.*—The Plan also provides K 9·60 lakhs for development works in States, by N.H.B. particularly construction of housing facilities in the Chin Special Division.

95. *Development Works.*—Development works project will be carried out under two heads :—

(*a*) Rangoon Development Works.
(*b*) Construction of New Towns.

Total cost for the above two is estimated at K 515.93 lakhs.

96. *Rangoon Development Works.*—K 115·93 lakhs is provided for various development works in Rangoon. These include modification of existing roads, opening up of new roads for better communication in the Rangoon general area, and the development of an industrial site.

97. *Construction of New Towns.*—With the object of removing insanitary hutments within the city of Rangoon, caused by rapid influx of population in the post-war period, new towns were constructed at North Okkalapa, South Okkalapa, Thaketa and Thuwunna. A provision of K 400·00 lakhs is made under the Plan for further development works at these towns. These include construction of roads and drains, buildings and water supply works.

98. *Civil Works.*—Under the Four-Year Plan K 1,560·21 lakhs is provided for Civil Works. The departments and agencies included in the Civil Works are 28 in number. More than half of the total provision is allocated for construction of the Intermediate College and the New Parliament building. (K 492·07 lakhs and K 350·00 lakhs respectively.) Major portion of K 214·34 lakhs provided for the Health Department under the Four-Year Plan, will be utilized for the construction of Rangoon General Hospital Extension, the Dufferin Hospital Extension, Central Medical Stores Extension, a 200-bedded hospital at West Rangoon and a Children's Hospital.

Construction of new Police Stations, Police Supply Depots, Motor Vehicles Department Building and reconstruction and modernization of several Police Stations, etc., will be undertaken at a total estimated cost of K 113·14 lakhs.

Other constructional works under the Plan are :—

1. Construction of school buildings, teacher's training institutes and technical schools;
2. Construction of office buildings, godowns and quarters for Customs Department;
3. Construction of a hostel, lecture halls, laboratories, anatomical and dissection room, operation block, examination room and surgery, bacteriological complex and quarters for the Veterinary Department at Insein;
4. Construction of a three-storeyed Government Information building and quarters for B.B.S. Officers and Staff;
5. Various types of buildings ranging from Receiving and Transmitting Stations and Postal buildings to living quarters and godowns for Post and Telecoms:
6. Construction of Immigration Offices and quarters in various towns;
7. Construction of Directorate of Survey, Basic Geodetic and Research and Survey School, a map printing and drawing office and an air conditioning room in Aerial Survey Building for storage of photographic equipment,
8. Accounting and Tax Offices for Finance and Revenue,
9. Buildings for Union Culture and Fire Services,
10. A Public Administration Building, and
11. Buildings for Public Health, Meteorological and Geological Departments, Public Works, Jail, Mines, etc., and renovation to Foreign Office.

99. *Standing Divisional Building Committee.*—The Standing Divisional Building Committee is entrusted with constructional works in the districts. Total provision made under the Four-Year Plan is K 625·00 lakhs.

100. The Implementation of this extensive programme of construction will require organizational and procedural changes in the administration of construction. The P.W.D. Code will be reviewed and amended to suit modern practices. The relationship between the National Housing Board and the Public Works Department will be studied and modified to overcome duplication and to achieve speedy, efficient and economic execution of works. If necessary, regional bodies will be established to mobilize all available constructional material and human resources. Design and specifications of structures will be modified to obtain results at minimun costs consistent with functional needs. Where possible temporary or semi-temporary structures will be erected instead of more expensive permanent ones.

101. *Rehabilitation Brigade.*—A total contribution of K 60·00 lakhs is made in the Four-Year Plan for the Extension of Aungsan Myo Project. Included under the Extension of Aungsan Myo Project are:—

(*a*) Construction of residential buildings.
(*b*) Construction of other buildings and
(*c*) Electrical and Sanitary installations, Water Supply and construction of drains.

TABLE 111.—*Capital Expenditure Under Four-Year Plan* (1961-62 *to* 1964-65)

(In K Lakhs)

Sr. No. (1)	Name of Projects or Components (2)	1961-62		1962-63		1963-64		1964-65		Total	
		Total (3)	F.E. (4)	Total (5)	F.E. (6)	Total (7)	F.E. (8)	Total (9)	F.E. (10)	Total (11)	F.E. (12)
	I. EDUCATION ‡ ...	**53·44**	**6·75**	**93·49**	**10·08**	**83·68**	**7·66**	**61·78**	**13·06**	**292·39**	**37·55**
1	**Directorate of Technical Education** ...	**0·85**	**0·45**	**14·72**	**3·03**	**10·17**	**0·11**	**17·17**	**5·11**	**42·91**	**8·79**
	(*a*) Mandalay Artisan Training Centre*.—a. Construction of new buildings.	...	...	...	...	...	...	...	...	...	...
	(*b*) Rangoon and Mandalay Artisan Training Centres.—a. Purchase of equipment, consumable and non-consumable stores.	0·50	0·20	4·00	2·50	...	...	...	...	4·50	2·70
	(*c*) Mandalay Government Technical.—a. Electrical equipment and supplies for evening technical classes.	0·20	0·15	0·20	0·15	0·05	0·03	0·05	0·03	0·50	0·36
	(*d*) Insein Government Technical Institute.†—a. Land and Staff quarters.	...	...	...	...	...	...	...	...	...	...
	(*e*) Rangoon Handicraft School.—a. Equipment.	0·15	0·10	0·12	0·08	0·12	0·08	0·12	0·08	0·51	0·34
	(*f*) Mandalay Government Technical Institute.—a. Construction of buildings for classes, hostels, workshop and staff quarters.	...	...	10·00	...	10·00	...	10·00	...	30·00	...
	(*g*) Rangoon Technical High School (To change 2 year course to 3 -year course).—a. Equipment and Supplies.	...	...	0·40	0·30	...	...	...	...	0·40	0·30
	(*h*) Proposed Technical High School at Mandalay.—a. Equipment and Furniture.	...	...	...	...	...	...	7·00	5·00	7·00	5·00
2	**Directorate of Education**	**28·60**	**6·30**	**28·55**	**7·05**	**30·05**	**7·55**	**31·35**	**7·95**	**118·55**	**28·85**
	(*a*) Construction of 5 Nos. Teacher's Training School.*	...	...	...	...	...	...	...	...	...	...
	(*b*) Furniture for Teacher's Training School.	1·55	...	...	...	...	...	...	...	1·55	...
	(*c*) Construction of High Schools, Agricultural, Technical and Vocational Schools (10 schools a year).†	...	...	...	...	...	...	...	...	...	...

	(*d*) Science Project.—										
	a. Science kit for Middle Schools ...	1·00	0·50	1·00	0·50	1·00	0·50	0·80	0·40	3·80	1·90
	b. Science kit for High Schools ...	1·50	0·75	3·00	1·50	4·50	2·00	6·00	2·50	15·00	6·75
	(*e*) School Library Project	0·50	...	0·50	...	0·50	...	0·50	...	2·00	...
	(*f*) Equipment for agricultural and technical education.	0·50	0·25	0·50	0·25	0·50	0·25	0·50	0·25	2·00	1·00
	(*g*) Equipment for Art	0·20	0·10	0·20	0·10	0·20	0·10	0·20	0·10	0·80	0·40
	(*h*) Equipment for Domestic Science ...	0·50	0·25	0·50	0·25	0·50	0·25	0·50	0·25	2·00	1·00
	(*i*) Physical education project ...	7·00	3·00	7·00	3·00	7·00	3·00	7·00	3·00	28·00	12·00
	(*j*) Furniture for Middle and High Schools	10·00	...	10·00	...	10·00	...	10·00	...	40·00	...
	(*k*) Furniture for New Middle and High Schools.	4·00	...	4·00	...	4·00	...	4·00	...	16·00	...
	(*l*) Duplicating Machine	0·65	0·50	0·65	0·50	0·65	0·50	0·65	0·50	2·60	2·00
	(*m*) Burmese Typewriters	1·00	0·80	1·00	0·80	1·00	0·80	1·00	0·80	4·00	3·20
	(*n*) English Typewriters	0·20	0·15	0·20	0·15	0·20	0·15	0·20	0·15	0·80	0·60
3	Rangoon University	5·50	...	10·50	...	5·50	...	0·50	...	22·00	...
4	Moulmein College	4·79	...	14·96	...	13·38	...	4·48	...	37·61	...
5	Kyaukpyu College	1·00	...	1·18	...	2·41	...	2·14	...	6·73	...
6	Bassein College	0·70	...	6·58	...	6·17	...	6·14	...	19·59	...
7	Mandalay University	10·00	...	10·00	...	10·00	...	...	...	30·00	...
8	Magwe College	1·00	...	1·00	...	...	...	...	...	2·00	...
9	Taunggyi College	0·50	...	3·00	...	3·00	...	...	...	6·50	...
10	Myitkyina College	0·50	...	3·00	...	3·00	...	...	...	6·50	...
	II. HEALTH § ...	**16·61**	**4·55**	**23·92**	**5·06**	**20·37**	**5·33**	**19·25**	**5·39**	**80·15**	**20·33**
1	**Medical Capital Outlay**¶—Procurement of of medicines, drugs, etc.	**10·71**	**4·55**	**12·00**	**5·06**	**12·70**	**5·33**	**12·70**	**5·39**	**48·11**	**20·33**
2	**Public Health Capital Outlay** ...	**5·90**	...	**11·92**	...	**7·67**	...	**6·55**	...	**32.04**	...
	(*a*) Lady Health Visitor, Midwives and nurses.*	...	...	...	...	...	...	...	...	...	...
	(*b*) Tuberculosis	1·50	...	...	...	...	...	...	...	1·50	...
	(*c*) Rural Health Centres	...	...	...	...	...	...	...	...	...	...
	(*d*) Maternity and Child Health Centres	1·10	...	1·92	...	1·92	...	2·22	...	7·16	...
	(*e*) Indigenous System of Medicine ...	...	...	5·00	...	5·00	...	4·00	...	14·00	...
	(*f*) Epidemiologist	0·25	...	...	...	...	...	...	...	0·25	...
	(*g*) Port Health	2·50	...	...	...	...	...	...	...	2·50	...
	(*h*) Contagious Disease Control ...	0·55	...	...	...	...	...	0·33	...	0·88	...
	(*i*) Dental and Maxi Uo Facial Project ...	...	...	5·00	...	0·75	...	...	...	5·75	...

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* Under National Housing Board. † Under Standing Divisional Committee for building construction. ‡ Excludes provision for Education under NHB.

(¶) Net figure. (§) Excludes provision for Civil Works under NHB.

TABLE 111.—*Capital Expenditure Under Four-Year Plan* (1961-62 *to* 1964-65)—concld.

(In K Lakhs)

Sr. No. (1)	Name of Agency or Projects (2)	1961-62		1962-63		1963-64		1964-65		Total	
		Total (3)	F. E. (4)	Total (5)	F. E. (6)	Total (7)	F. E. (8)	Total (9)	F. E. (10)	Total (11)	F. E. (12)
	III. SOCIAL WELFARE										
	Board for the Rehabilitation and Employment of disabled persons.	**1·00**	**1·00**	**0·20**	**0·20**	**0·20**	**0·20**	**0·20**	**0·20**	**1·60**	**1·60**

OTHER SERVICES

TABLE 112.—*Capital Expenditure Under Four-Year Plan* (1961-62 *to* 1964-65)

(In K Lakhs)

Sr. No. (1)	Name of Agency or Projects. (2)	1961-62 Total (3)	1961-62 F.E. (4)	1962-63 Total (5)	1962-63 F.E. (6)	1963-64 Total (7)	1963-64 F.E. (8)	1964-65 Total (9)	1964-65 F.E. (10)	Total Total (11)	Total F.E. (12)
1	**Rural Sanitation and Water Supply Board.**—Tube Wells and piping of water from rivers, springs and streams.	25·00	...	18·00	...	15·00	...	10·00	...	68·00	...
2	**Directorate of Fire Services.**—Purchase of Fire engines and equipment.	15·72	12·48	15·00	12.50	12·50	10·00	12·50	10·00	55·72	44·48
3	**Union Insurance Board**	20·24	7·74	25·75	8·25	25·75	10·75	30·75	13·25	102·49	39·99
	(*a*) Office Building	10·00	7·50	15·00	7·50	15·00	10·00	20·00	12·50	60·00	37·50
	(*b*) Office Car	0·24	0·24	0·75	0·75	0·75	0·75	0·75	0·75	2·49	2·49
	(*c*) Loans for Housing Scheme	10·00	...	10·00	...	10·00	...	10·00	...	40·00	...
4	**Social Security Board**	2·40	...	1·10	...	2·40	...	2·50	...	8·40	...
	(*a*) Purchase of Ambulances ...	0·40	...	0·60	...	0·40	...	0·50	...	1·90	...
	(*b*) Purchase of Equipment	2·00	...	0·50	...	2·00	...	2·00	...	6·50	...
5	**Contribution to Rangoon Corporation**	60·00	...	50·00	...	55·00	...	45·00	...	210·00	...
6	**Union of Burma Purchase Board** ...	2·14	...	1·00	...	1·00	...	1·00	...	5.14	...
	(1) Godowns	0·50									
	(2) Equipment, Plant and Machinery ...	1·64	...	1·00	...	1·00	...	1·00	...	5·14	...
7	**Civil Supplies Management Board** ...	13·00	...	8·00	...	8·00	...	8·00	...	37·00	...
8	**Ministry of Union Culture** ...	...	...	...	...	5·00	2·50	5·00	2·50	10·00	5·00
9	**Broadcasting Department.**—Procurement and installation of RCA type 10 KW transmitters.	...	...	...	...	...	...	5·57	4·42	5·57	4·42
10	State Film Promotion Board ...	4·20	3·00	3·50	2·50	2·50	1·50	...	...	10·20	7·00
11	Government Printing and Stationery Procurement of Machines.	5·00	4·00	6·00	4·80	6·00	4·80	5·00	4·00	22·00	17·60
12	**State Pawnshop Board.**—Construction of Offices and Pawnshops Building.	...	...	8·00	...	...	...	4·00	...	12·00	...

13	**Union of Burma Stevedoring Board** ...	2·52	1·10	4·90	0·40	4·85	0·40	0·90	0·40	13·17	2·30
	(*a*) Gear, Stores, Gear Tolls and equipment.	0·90	0·40	0·85	0·40	0·85	0·40	0·85	0·40	3·45	1·60
	(*b*) Furnitures, fixtures and fittings ...	0·02	...	0·05	...	...	...	0·05	...	0·12	...
	(*c*) Water Crafts	0·55	...	...	...	...	...	...	...	0·55	...
	(*d*) Buildings	...	...	4·00	...	4·00	...	...	...	8·00	...
	(*e*) Trucks	1·05	0·70	...	...	...	...	...	...	1·05	0·70
14	**Religious Affairs.**—International Institute for Advance Buddhistic Studies.	10·25	...	8·00	...	3·50	...	0·50	...	22·25	...
	(1) Museum	8·00	...	4·00	...	3·00	...	...	...	15·00	...
	(2) Library	2·00	...	4·00	...	0·50	...	0·50	...	7·00	...
	(3) Vehicles	0·25	...	...	...	...	...	...	...	0·25	...
15	**Foreign Office (Abroad)** *	57·06	57·06	53·50	53·50	49·50	49·50	21·33	21·33	181·39	181·39
	(1) Construction of Buildings for the Burmese Embassy, Tokyo.	5·06	5·06	12·00	12·00	12·00	12·00	...	...	29·06	29·06
	(2) Construction or Purchase of Chancery Residential Buildings at—										
	(*a*) New Delhi	12·00	12·00	12·00	12·00	6·00	6·00	...	...	30·00	30·00
	(*b*) Peking	5·00	5·00	12·00	12·00	7·00	7·00	6·00	6·00	30·00	30·00
	(*c*) Cairo	12·00	12·00	...	...	...	...	...	...	12·00	12·00
	(*d*) Phnom Penh	10·00	10·00	...	...	...	...	...	...	10·00	10·00
	(*e*) Tel Aviv	...	...	10·00	10·00	5·00	5·00	...	...	15·00	15·00
	(*f*) Colombo	...	...	...	...	5·00	5·00	4·00	4·00	9·00	9·00
	(*g*) Canberra	...	...	...	...	8·00	8·00	6·00	6·00	14·00	14·00
	(3) Purchase of Vehicles	3·00	3·00	2·50	2·50	1·50	1.50	0·33	0·33	7·33	7·33
	(4) Purchase of Equipments ...	10·00	10·00	5·00	5·00	5·00	5·00	5·00	5·00	25·00	25·00
16	**Zoological Garden**	2·00	...	2·00	...	2·00	...	2·00	...	8·00	...

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* Excludes NHB Works.

TABLE 113.—*Capital Expenditure Under Four-Year Plan* (1961-62 *to* 1964-65)

(In K Lakhs)

(1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)	Total (6)
NATIONAL HOUSING BOARD * ...	**986·13**	**943·44**	**898·25**	**849·73**	**3677·55**
1. **National Housing Project**	**38·76**	**28·60**	**28·60**	**23·60**	**119·56**
Rangoon Housing	25·00	22·00	22·00	17·00	86·00
Lanmadaw (8 Nos.)	6·00	6·00	6·00	6·00	24·00
Link Road (6 Nos.)	5·00	5·00	5·00	...	15·00
Yankin (8 Nos.)	6·00	6·00	6·00	6·00	24·00
Ananbin Village Scheme	8·00	5·00	5·00	5·00	23·00
District Housing	7·70	6·60	6·60	6·60	27·50
Mandalay (12 Nos.)	7·70	6·60	6·60	6·60	27·50
Carry Over Works	6·06	...	...	...	6·06
2. **Town Development**	**121·82**	**171·71**	**200·97**	**305·00**	**799·50**
a. *Rangoon Water Supply*	79·46	95·78	100·97	150·00	426·21
Short Term programme.—Water Supply (Degremont).	26·21	1·19	0·97	...	28·37
National Housing Board—ICA ...	9·62	10·57	...	...	20·19
Local ...	10·68	11·10	...	...	21·78
Improvement to pipes—Rangoon Corporation—ICA.	14·50	14·49	...	...	28·99
Local ...	8·45	8·43	...	...	16·88
Long Term Programme—Water Supply—ICA.	10·00	50·00	100·00	150·00	310·00
b. *Rangoon Sewerage System* ...	32·86	35·93	30·00	50·00	148·79
Short-Term Programme—ICA ...	14·81	9·66	...	...	24·47
Local ...	8·05	6·27	...	...	14·32
Long-Term Programme	† 10·00	† 20·00	30·00	50·00	110·00
c. *District Water Supply*	6·00	40·00	70·00	105·00	221·00
Moulmein, Mandalay, Akyab—ICA ...	4·00	30·00	50·00	75·00	159·00
Prome and Magwe (Survey)—Local ...	2·00	10·00	20·00	30·00	62·00
d. *Town Water Supply*	3·50	...	...	...	3·50
Falam—Water Supply	1·50	...	...	...	1·50
Bassein—Roads and drains	1·00	...	...	...	1·00
Mandalay—Improvement of Town Water Supply.	1·00	...	...	...	1·00
3. **Economic Development Industries** ...	**0·30**	**0·30**	**0·30**	**0·30**	**1·20**
Industrial Research	0·30	0·30	0·30	0·30	1·20

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* Includes provision for Standing Divisional Building Committee.

† Survey.

— (1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)	Total (6)
4. **Country Development in States** ...	**2·40**	**2·40**	**2·40**	**2·40**	**9·60**
5. **Development Works**	**128·50**	**135·25**	**126·75**	**125·43**	**515·93**
a. *Rangoon Development Trust Works* ...	28·50	35·25	26·75	25·43	115·93
1. Completion of U Chit Maung Road ...	1·00	0·50	...	...	1·50
2. Improvement to Yankin Road ...	1·50	...	...	...	1·50
3. Construction of lanes and drains at Hledan Burnt out area.	1·00	3·00	3·00	5·00	12·00
4. Acquisition of land for Rangoon Development Trust Works.	15·00	10·00	5·00	5·43	35·43
5. Construction of dual lane from U Wizara Road to Shwedagon South Moat along Ahlone Road.	...	1·75	1·75	...	3·50
6. Widening and repairing of Churchill and Boundary Roads junction.	...	1·50	1·00	1·00	3·50
7. Construction of 50′ wide road parallel to Bagaya Phongyi Road, Surite Bazaar Road and Kemmendine Strand Road.	...	3·00	4·00	3·00	10·00
8. Construction of a road from Kaba Aye Road up to Chawdwingon School.	...	3·50	2·00	3·00	8·50
9. Industrial Site	10·00	10·00	5·00	5·00	30·00
10. Construction of a road connecting Majid Road and Tantuma Road of Thuwunna New Town.	...	2·00	5·00	3·00	10·00
b. *New Towns*	100·00	100·00	100·00	100·00	400·00
6. **Tools and Plants**	**15·00**	**5·00**	**5·00**	**5·00**	**30·00**
Purchase of Tools and Plants inclusive of Accounting Machines for the 1st year.	15·00	5·00	5·00	5·00	30·00
7. **Proper N.H.B. Works**	**16·56**	...	...	...	**16·56**
8. **Standing Divisional Building Committee**	**175·00**	**150·00**	**150·00**	**150·00**	**62·500**
9. **Civil Works**	**487·79**	**450·18**	**384·23**	**238·00**	**1,560·20**
Customs	5·26	4·00	2·00	2·00	13·26
Veterinary	10·10	7·84	3·05	1·55	22·54
Police	20·68	40·46	23·00	29·00	113·14
Education	28·49	14·50	13·50	3·00	59·49
Health	116·99	47·25	38·10	12·00	214·34
Information	5·75	2·09	2·07	0·50	10·41
Posts and Telecoms.	25·44	6·84	1·90	5·85	40·03
Immigration	9·29	4·50	9·21	13·16	36·16
Judicial	...	1·67	...	...	1·67
Survey	13·90	21·53	5·30	...	40·73
Foreign Office	2·52	...	...	...	2·52

(1)	1961-62 (2)	1962-63 (3)	1963-64 (4)	1964-65 (5)	Total (6)
Public Works	2·38	1·00	1·00	1·00	5·38
President's House	2·00	...	...	...	2·00
Jail	9·52	...	...	...	9·52
Meteorological	3·54	0·50	...	...	4·04
Geological	5·00	4·00	...	...	9·00
Chin Affairs	1·00	...	...	...	1·00
Public Administration	7·00	8·00	5·00	...	20·00
Agriculture Department	...	4·00	...	...	4·00
Mines Department	...	2·00	0·50	...	2·50
Finance and Revenue. (Accounting and Tax Offices).	1·00	10·00	15·00	10·00	36·00
New Parliament Building	5·00	100·00	150·00	95·00	350·00
Public Health	...	5·00	5·00	5·00	15·00
Intermediate College	199·03	153·00	89·10	50·94	492·07
Union Culture	11·50	10·50	16·50	5·00	43·50
Fire Services	...	...	3·00	3·00	6·00
Social Welfare	1·00	0·50	...	...	1·50
Marine and Civil Aviation	1·40	...	...	...	1·40
Civil Minor Original Works	...	1·00	1·00	1·00	3·00
10. **Rehabilitation Brigade**	**15·00**	**15·00**	**15·00**	**15·00**	**60·00**
Government Contribution to Rehabilitation Brigade.	15·00	15·00	15·00	15·00	60·00

CHAPTER XV

LAW AND ORDER

1. Law and Order is the pre-requisite of economic and social development. Development measures directed at the restoration of transport and communication, increased agricultural production, social services, electric power and industry can be achieved best only when peaceful conditions obtain. The Plan places great importance upon the maintenance of law and order. The strengthening and improvement of the Police Force is considered to be a valuable step towards this objective.

2. The two main programmes of the Police Force under the Plan are the expansion programme for the suppression of crime and the qualitative improvement of the Police Force.

Suppression of Crime

[illegible]. The Police Force have been assigned an increasing amount of varied duties with the result that specialization of work cannot be effected. The duties involve suppression of insurgency, criminal investigation, security measures, etc. To obtain concentration of attention on criminal investigation and prosecution, division of the work will be introduced. The two categories are (*a*) Order Work and (*b*) Crime Work. This system will come into force from 1961 in towns with Commissioner of Police Offices, from 1962 in towns with Sub-divisional Police Offices, and from 1963-64 in other towns and police stations. Simultaneously, for effective supervision of work, the status of Sub-Inspector of Police in charge of Police station will be raised to Police Station Inspector. To curtail additional expenditure the present Circle Inspectors of Police will be replaced by Police Station Inspectors.

4. In Order Work, prevention of crime is one of the main functions which includes patrolling, expansion of police out-posts and police stations, and surveillance.

(*a*) *Patrolling*.—For the prevention of crime in the rural areas, continuous patrolling of all localities will be made in the districts. The patrols will be equipped with modern equipment and the necessary motor vehicles and watercraft. In big towns, the system of day and night beat patrol will be arranged from 1961 and later will be extended to other towns.

(*b*) *Expansion of Police Out-posts and Police Stations*.—Police out-posts have been opened and expanded since 1948 due to the insurrections. Most of these out-posts are still maintained. The programme of maintaining and withdrawing of out-posts will be considered in consultation with the Armed Forces during 1961. As security conditions improve it becomes necessary to open more ordinary police stations. During 1961, it is proposed to open 41 permanent police stations.

(*c*) *Surveillance*.—The important functions are—

(1) To maintain criminal records.
(2) To provide facilities for the prevention of crime.
(3) To arrest absconders.

(1) *To maintain Criminal Records*.—Police officer of the rank of Surveillance SIP is required for the task. The task of surveillance carries important assignments and being too important a task for a head constable should be assigned to a Sub-Inspector of Police. In pre-war, the Railways Police and Investigation Department had a Criminal Records Office. However, the records were destroyed during the war and insurrections. Recordings are being renewed. This office will be adequately equipped with modern equipment. From 1961 police stations are to maintain criminal card indices and this system will be extended yearly.

(2) *To provide facilities for the Prevention of Crime.*—Sections 107, 108, 109, 110 of the present Code of Criminal Procedure cannot be successfully applied in the prevention of crime due to difficulties in the interpretation of law and as such amendment is necessary. This involves short-term and long-term plans. During 1961, the amendment draft of section 110 will be presented to the Government.

From 1961, in order to prevent crimes, systematic and strict regulations will be enforced with respect to public discipline, traffic regulations, and excise and gambling.

(3) *To Arrest Absconders.*—From 1961 there will be formed surveillance squads at police stations and absconder squads at the Railway Police and Investigation Department for the successful arrest of absconders.

5. Increasing assignment of functions to the police force necessitates an expansion in the service. More Subdivisional Police Officers are required to supervise the 41 new police stations which will be opened during the first year of the Plan. Three more posts of Deputy Inspector-General of Police are required. The Criminal Investigation Department will need six more District Superintendents of Police.

6. The main functions of crime work are investigation and prosecution:

(*a*) *Investigation.*—At present each investigation officer has over 75 cases a year and some over 200 cases with the result that investigation cannot be made speedily and effectively. Arrangements will be made for each officer to investigate not more than 75 cases a year.

(*b*) *Prosecution.*—Prosecution is the most important function in crime work. There are no special posts for prosecution and suitable personnel were assigned the duties of prosecution. This system has many defects. Due to lack of experience many cases which should have been decided in favour of the cases were lost. From 1961, plans are made to adopt division of executive cadre and court prosecuting cadre in the Police Force.

Qualitative Improvement

7. Programme for qualitative improvement includes training, the improvement of conditions of work and morale uplift.

8. Previously, recruited police constables were given training by Sub-Inspectors of Police and Head Constables in the divisions. The period of training differed from one division to another. The syllabus for the training course was prescribed by the Commissioner of Police (Training), but due to the variation in the standard of instruction in the various divisions a standardized form has never been achieved. This will be remedied by providing a training course for instructors in methods of training at Police Headquarters.

9. A detective training course will be opened at the Railways Police and Investigation Department, Insein. Selected Investigation Sub-Inspectors of Police and Inspectors of Police will attend a six months' training course.

10. The subjects and methods are to be revised for the training course of gazetted police officers, Inspectors of Police and Sub-Inspectors of Police at the Provincial Police Training Institute.

11. To improve the standard and calibre of the Police Force, all ranks from police constable to District Superintendents of Police are to attend specialized training courses on wireless, shorthand and typing, motor vehicle, intelligence, investigation, prosecution, administration, local and foreign language, finger print, photography, map drawing. In addition, police personnel will be deputed to undergo military training courses such as

elementary military education, sergeant course, war operations, junior leadership course, junior officers' course, Officers' training course, platoon commanders' course, company commander's course and senior police officials will attend the National Defence College.

12. To promote the standard of training, senior police officials are to be appointed as instructors at the Divisional Police Training Depots, Detective School, Provincial Police Training Institute and Deputy Superintendent of Police and Inspector of Police training course.

13. To uplift the morale of the police staff measures have been proposed to increase the salary of the police staff, to arrange for welfare facilities, to establish cordial social relations with the public and press and to form advisory committees.

14. *Capital Expenditure Programme.*—To strengthen the Police Force, the Four-Year Plan provides capital outlay of K 45·6 million for constructional facilities, purchase of vehicles, crafts, equipment and stores. For improvement of present conditions of work, provisions have been made for modernization and construction of buildings consisting of lock-ups, officers' quarters, wireless stations, police stations, medico-legal institute, pathological laboratory, garage, office and supplies buildings.

15. *National Service.*—As the peace and defence of the Union is the concern of every citizen the National Service Act was promulgated in 1957. A scheme has now been formulated for implementation. According to this scheme part-time training programmes will first be effected in the cities. National servicemen will report for training duty twice or thrice a week and will be in training camp for a fortnight to a month a year. After two years' attendance they will be put on the reserve. Training will be provided by a nucleus of Army personnel while administration will be under the area Brigade/Battalion and civil and police authorities.

The following is the schedule for the opening of training camps:—

1961-62	...	Rangoon, Mandalay and Meiktila.
1962-63	...	Moulmein, Bassein and Toungoo.
1963-64	...	Akyab, Magwe and Sagaing.
1964-65	...	Prome, Pegu, Shwebo and Monywa.

Current expenditures for each of the four years of the Plan period are estimated to be K 21·0 lakhs, K 52·0 lakhs, K 83·0 lakhs and K 123·0 lakhs respectively.

The present scheme will be reviewed in the last year of the Plan period. If internal security conditions permit, whole-time training scheme will be implemented. It will then be possible to substitute a certain percentage of the present regular Army strength with national servicemen.

The present scheme concerns the Army. Schemes for the Navy and Air Force will be submitted after study of the progress of the present scheme.

16. *Frontier Areas Administration.*—Since the attainment of Independence, the demarcation of the Union's boundaries and the maintenance of security in frontier areas became one of the foremost responsibilities of the Union Government. The lack of a special agency having responsibilities of directly administering the frontier areas resulted in an unchecked influx of illegal immigrants and lack of security in parts of her border. The decision by the Government of the Union of Burma to form an organization capable of effectively handling all matters relating to the frontier areas led to the birth of the Frontier Areas Administration in 1959. The Shan State Council and the Kachin State Council passed

resolutions relating to the transfer of essential areas of the frontier region to the Union Government. This was followed by the signing of an agreement between the Union Government and the State Governments in December 1959. The State Governments also transferred most of their subjects in the State Legislative List. These acts paved the way for the early implementation of the Frontier Areas Scheme.

Under the terms of the Agreement between the Union and the State signed in December 1959, the Union agreed—

(*a*) to form an organization to administer the frontier areas and carry out development programmes;

(*b*) to set up an effective administrative organization and administer these areas in co-ordination with the State concerned ;

(*c*) that the Frontier Areas Administration will be responsible for all matters relating to the administration, security and the development of the frontier areas of the Union of Burma ;

(*d*) that the cost of administration and development projects will be borne by the Union Government ;

(*e*) that the Frontier Areas Administration will administer the areas transferred by the State Governments for seven years in the first instance and if necessary will extend its administration up to ten years.

It is proposed to extend Frontier Areas Administration to areas in the Naga district and along the Thailand Border. Out-posts will be opened in the strategic areas, main roads leading to Divisional Headquarters will be notified Union Highways. Jeepable roads will be constructed in all subdivisions. For the development of Frontier Areas terraced cultivation will replace *tuungya*. Model farms, cattle breeding centres, hill cultivation, schools, irrigation and water supply works will be established. Orchards will be encouraged and markets secured for the products, essential goods and foodstuffs will be supplied at cheap rates. Electricity installations will be set up and suitable cottage industries established.

Existing schools and hospitals will be improved and new schools and hospitals opened wherever necessary. Teachers will be trained, scholarships granted and mobile health teams sent to all Frontier regions. Frontier culture will be revived.

The Four-Year Plan provides K 374·38 lakhs for the implementation of above programmes.

17. *Immigration Department.*—Funds amounting to K 39·02 lakhs are provided in the Four-Year Plan for the purchase of motor vehicles and motor launches to facilitate movement of patrolling and intelligence squads.

18. *National Registration Department.*—The Four-Year Plan provides funds of K 1·70 lakhs for procurement of motor vehicle.

19. *Judicial Department.*—The Four-Year Plan provides K 2·52 lakhs for purchase of typewriters.

TABLE 114.—*Capital Expenditure Under Four-Year Plan* (1961-62 *to* 1964-65)

LAW AND ORDER *

(In K Lakhs)

Sr. No. (1)	Name of Agency or Projects. (2)	1961-62 Total (3)	1961-62 F.E. (4)	1962-63 Total (5)	1962-63 F.E. (6)	1963-64 Total (7)	1963-64 F.E. (8)	1964-65 Total (9)	1964-65 F.E. (10)	Total Total (11)	Total F.E. (12)
1	**Inspector-General of Police †**	**165·00**	**81·00**	**76·00**	**32·00**	**63·00**	**20·00**	**39·00**	**8·00**	**343·00**	**141·00**
	(*a*) Works-Petty Construction ...	25·00	...	25·00	...	25·00	...	25·00	...	100·00	...
	(*b*) Purchase of Vehicles	35·00	28·00	18·00	14·00	10·00	7·00	5·00	4·00	68·00	53·00
	(*c*) Purchase of Crafts	80·00	36·00	20·00	9·00	20·00	9·00	5·00	2·00	125·00	56·00
	(*d*) Equipment and Stores	25·00	17·00	13·00	9·00	8·00	4·00	4·00	2·00	50·00	32·00
2	**Frontier Administration**	**86.15**	**43·00**	**93·18**	**36·08**	**109·25**	**41·35**	**85·80**	**34·70**	**374·38**	**155·13**
	(*a*) Communication	28·77	7·19	49·23	12·31	57·39	14·35	32·80	8·20	168·19	42·05
	(*b*) Water Supply	5·19	4·33	2·95	2·77	1·86	1·50	...	...	10·00	8·60
	(*c*) Purchase of Tools and Plant ...	18·19	16·00	3·00	2·50	2·00	1·50	...	...	23·19	20·00
	(*d*) Purchase of Medical Stores, Health, Education, Material and Motor Vehicles under FAA.	3·00	2·00	3·00	2·00	3·00	2·00	3·00	2·00	12·00	8·00
	(*e*) Development of Agriculture and Cottage Industry.	10·00	4·00	10·00	4·00	15·00	7·00	15·00	7·00	50·00	22·00
	(*d*) Resettlement	21·00	9·48	25·00	12·50	30·00	15·00	35·00	17·50	111·00	54·48
3	**Immigration Department**	**14·78**	**11·58**	**20·68**	**15·89**	**1·78**	**0·89**	**1·78**	**0·89**	**39·02**	**29·25**
	(*a*) Motor Vehicles	1·78	0·89	1·78	0·89	1·78	0·89	1·78	0·89	7·12	3·56
	(*b*) Motor Launches	13·00	10·69	18·90	15·00	...	...	...	...	31·90	25·69
4	**National Registration Department** ...	**1·70**	**0·90**	...	...	...	...	...	...	**1·70**	**0·90**
	Purchase of Motor Vehicles	1·70	0·90	...	...	...	...	...	...	1·70	0·90
5	**Judicial.**—Purchase of typewriters ...	**2·52**	...	...	...	...	...	...	...	**2·52**	...

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* Excludes Defence Services.

† Excludes provision for Civil Works under NHB.

CHAPTER XVI

STATE PLANS

CHIN SPECIAL DIVISION

1. Chin Hill is a Special Division of Burma proper. Therefore development programmes for some of the sectors of the regions are already included under the Four-Year Plan of Burma proper.

2. *Agriculture* .—The total area of the Chin Special Division is some 13,000 square miles. The cultivated area in the region is approximately a little over 4 lakhs acres or about 5 per cent of the total area. The cultivation on the hills is *taungya* and it consists of both varieties of millet for home consumption. Maize is also commonly grown. Groundnut and sesamum are barely sufficient for local consumption and their area is not large. Tobacco is grown along the streams. Coffee cultivation is still in its infancy but the area under orange cultivation is spreading. The present practice of *taungya* or shifting cultivation is extremely wasteful of the land resources. This system of cultivation is to be replaced by terrace cultivation in order to save valuable forest, prevent soil erosion, maintain soil fertility and increase cultivated area as well as productivity. There is also need for diversification of agricultural production in order to suit the local and external market. The region is especially suitable for extensive cultivation of crops such as coffee, tea and various kinds of fruit trees such as oranges, apples, etc. Therefore the Plan includes programme for extension and intensive cultivation of various crops in that area. For the successful implementation of above programmes the Plan also provides for appointment of more agricultural officers in the Agricultural Department of the region.

3. *Education.*—Economic and social development of the region mostly depends upon education. At present there are 7 High Schools, 22 Middle Schools and 286 Primary Schools in the State. The Plan includes a programme for opening of 97 additional schools consisting of 14 Middle Schools, 81 Primary Schools, 2 Agricultural Middle Schools. The detailed programme is as below :—

TABLE 115.— *Construction of Schools during Plan Period.*

Year	Type of School		
	Middle School	Primary School	Agricultural Middle School
1961-62	5	21	1
1962-63	3	20	1
1963-64	3	20	...
1964-65	3	20	...
Total ...	14	81	2

4. *Health.*—A number of hospitals have been opened in the Chin Special Division at Falam, Tiddim, Haka, Kanpetlet, Mindat, Matupi and Paletwa. In addition to the above hospitals 25 rural health centres have also been opened. But to give more effective medical aid to the rural area more rural health centres are required. Accordingly, the Plan provides for the construction of 16 additional health centres in various rural areas of the division.

The programme also includes the establishment of four more Maternity and Child Health Centres at Tiddim, Haka, Matupi and Paletwa. Apart from the above activities, the control and suppression of malaria and leprosy in the region will also be carried out during the Plan period.

5. *Communications.*—Communication facilities are absolutely essential in the region. The Plan will provide funds for rehabilitation or construction of a number of roads including Mindat-Matupi road, Paletwa-Matupi road, No. 12 Stockade-Fort White road, Gangaw-Haka, Falam-Haka roads. The Plan also includes programmes for the development of telecommunications and postal system in the region.

6. *Construction.*—The Plan provides for the construction of a number of buildings, such as offices, schools, and residential quarters, etc., in the region.

7. *Law and Order.*—The Plan includes programmes for the improvement of law and order in the Division.

8. A special development plan for the Chin division will be drawn up in consultation with Union authorities.

KACHIN STATE

9. *Agriculture and Irrigation.*—The total area of the Kachin State is some 33,960 square miles, but the area under cultivation measures only 383 square miles of rich fertile plains. The cultivation consists mostly of paddy, millet, maize, sesamum, groundnut, etc., paddy is grown as a major crop in wet plains in both the districts of Myitkyina and Bhamo. Annual production of paddy is estimated at 85,000 tons of which only about one-half would be required for consumption within the State, the rest being exported to other districts in the Dry Zone or purchased by the State Agricultural Marketing Board for the foreign market. The Kachin State is rich in fertile lands both in the hills and in flooded valleys. Possible expansion of paddy, groundnut and other agricultural crops in new areas of the fertile lands of Hukawng Valley, round about Indawgyi Lake and near Washaung Village seems to offer bright prospects, for which proper irrigation projects and land reclamation projects would have to be carried out. The Four-Year Plan includes the implementation of Washaung Irrigation Project, Indawgyi and Hukawng Projects for crop expansion and agricultural development of the region. Also opium plantations will be substituted with other agricultural crops in frontier areas in the State.

10. (*a*) *Washaung Irrigation Project.*—About 5,000 square miles on each side of the Irrawaddy near Washaung Village are very fertile lands, but due to inadequate supply of water the cultivation of paddy, groundnut, and other agricultural crops is not so successful. Survey for the construction of the irrigation system had already been conducted in 1953. The Irrigation Project when completed will provide water supply for 7,500 acres in the neighbouring area of Washaung Village.

(*b*) *Indawgyi Project.*—The cultivated area is only about 10 per cent of the total area of 40,000 acres. The area is very fertile and is rich in cultivated soil, but most of the area is covered with forest. Land reclamation will be carried out with the help of mechanisation for agricultural development in that area.

(*c*) *Hukawng Project.*—Hukawng Valley area of the Myitkyina district needs reclamation. At present the area is covered with forests in most parts but the soil underneath is so fertile that it would be quite worthwhile to reclaim the land. After reclamation, about 300,000 acres of land would be available for cultivation of various crops.

(*d*) The other projects included under the Four-Year Plan consists of paddy expansion, groundnut and sugarcane extension, tea, coffee and orange plantation, insects and pest control and Mankhrin Experimental Farm Projects.

11. *Industry.*—For the Industrial development of the State, a 200 ton capacity new sugar mill and a plywood factory will be constructed under the Four-Year Plan. In addition, a jadecraft school for industrial education will be opened and improvement to existing sugar pilot plant is scheduled to be carried out during the Plan period.

12. *Communication* (*Road Construction*).—The improvement of the communication system in the State is of outstanding importance for the economic and social development of the region. Accordingly, the Four-Year Plan provides for the construction and improvement of a number of roads including Mandalay-Lashio-Myitkyina road (151 miles), Myitkyina-Ledo road (a portion of 65 miles, from 163 miles to 228 miles) and Myitkyina-Sumprabum-Putao road (86 miles).

13. *Health.*—The Myitkyina hospital which is now opened at the old hospital building is not adequate to meet the needs of the increasing population of the town and nearby area. The Plan provides for the construction of a General Hospital with ancillary buildings fully equipped with modern apparatus in Myitkyina, the capital of the Kachin State.

14. *Myitkyina and Bhamo Towns Water Supply.*—Myitkyina and Bhamo, two major towns of the Kachin State, has no public water supply system. The development of a water supply system is therefore necessary for the provision of minimum standards of sanitation and fire protection. Accordingly, the implementation of the town water supply system at Myitkyina and Bhamo is included in the Plan.

15. *Economic Development Fund.*—Under the Four-Year Plan provision of Economic Development Fund will be made with an initial capital of K 30 lakhs. The main objective of the project is for financing the various development projects of the State which are in need of funds.

16. *Economic and Engineering Survey of the Kachin State.*—The Kachin State is rich in natural resources which if properly exploited can develop its economy. A general engineering and economic survey will be conducted for the development of the Kachin State.

17. *Heavy Machine Workshop.*—The Plan provides for the procurement of equipment which are required for setting up of a heavy machine workshop in Myitkyina.

KACHIN STATE

TABLE 116.—*Capital Expenditures Under Four-Year Plan*

(In K Lakhs)

Sr. No. (1)	Name of Project. (2)	1961-62 Total (3)	1961-62 F.E. (4)	1962-63 Total (5)	1962-63 F.E. (6)	1963-64 Total (7)	1963-64 F.E. (8)	1964-65 Total (9)	1964-65 F.E. (10)	Total Total (11)	Total F.E. (12)
	Kachin State	163·76	83·52	161·43	79·80	123·05	42·90	81·51	21·90	529·75	228·12
1	*Irrigation*—										
	Minor Irrigation Projects	1·00	...	2·00	...	2·00	...	2·00	...	7·00	...
2	*Education*—										
	Agricultural equipment for boarding schools ...	1·00	·90	1·00	·90	1·00	·90	1·00	·90	4·00	3·60
3	*Medical*—										
	Regional Hospital for Myitkyina ...	7·00	3·00	6·00	3·00	6·00	2·00	6·00	2·00	25·00	10·00
	Hospital equipments	·50	...	·50	...	·50	...	·50	...	2·00	...
4	*Agriculture*—										
	(*a*) Hukawng Valley Project ...	4·30	3·06	1·10	...	1·10	...	1·10	...	7·60	3·06
	(*b*) Indawgyi Project	4·35	3·06	1·10	...	1·10	...	1·10	...	7·65	3·06
	(*c*) Groundnut Extension Project ...	6·88	5·00	5·08	4·50	5·08	4·00	5·08	4·00	22·12	17·50
	(*d*) Sugar-cane Extension Project ...										
	(*e*) Paddy Project										
	(*f*) Tea, Coffee and Orange Project ...										
	(*g*) Pest Control	1·50	...	1·50	...	1·50	...	1·50	...	6·00	...
	(*h*) Mankhrin Experimental Farm Project	1·91	...	1·74	...	1·77	...	1·73	...	7·15	...
5	*Trantport*—										
	Departmental transport for Police, Agriculture, Public Works, Veterinary, Information, Medical and Health Departments.	2·00	1·00	2·00	1·00	2·00	1·00	2·00	1·00	8·00	4·00

6	*Industry—*										
	(*a*) Industrial Education—Jade Craft School.	·65	·30	·40	...	·40	...	·40	...	1·85	·30
	(*b*) Improvement to existing Sugar Pilot Plant.	1·27	1·20	...	...	...	...	...	...	1·27	1·20
	(*c*) Sugar Factory 200 ton capacity in Bhamo.	20·00	15·00	5·00	...	...	...	...	...	25·00	15·00
	(*d*) Plywood Factory	...	...	20·00	20·00	17·00	10·00	...	...	37·00	30·00
7	*Public Works—*										
	(*a*) Buildings	26·72	5·00	25·88	4·50	19·00	3·00	16·00	3·00	87·60	15·50
	(*b*) Communications	25·48	12·00	26·65	5·00	26·40	3·00	25·90	3·00	114·43	23·00
	(*c*) Miscellaneous (River erosion, etc.)	2·00	...	2·00	...	2·00	...	2·00	...	8·00	...
	(*d*) Tools and Plants (Heavy Machine Workshop).	25·00	25·00	25·00	22·00	15·00	14·00	10·00	8·00	75·00	69·00
8	*Water Supply—*										
	(*a*) Myitkyina Town Water Supply ...	12·00	9·00	12·28	9·00	...	...	...	...	24·28	18·90
	(*b*) Bhamo Town Water Supply ...	...	...	12·00	9·00	16·00	5·00	...	...	28·00	14·00
9	*Veterinary—*										
	Mobile Van Dispensary	·20	...	·20	...	·20	...	·20	...	·80	...
10	*Rural Economic Development Fund* ...	10·00	...	10·00	...	5·00	...	5·00	...	30.00	...

18. *Agriculture and Irrigation.*—The total area of the Karen State is some 10,904 square miles. The cultivated area in the State is approximately 5·37 lakhs acres or only about 7 per cent of the total area. Cultivation consists mainly of paddy, groundnut, jute, rubber, etc. The physical resources indicate the possibilities for expansion of crops such as paddy, groundnut, jute, etc., in that region. Therefore, the Plan includes crop improvement and expansion projects with the help of mechanised ploughing and irrigation facilities. For the successful implementation of the above projects, measures like distribution of better quality seeds, adoption of improved cultivation methods, increased use of fertilizers, direct loans and advances to cultivators will also be carried out:

(a) *The Paddy Project.*—The present acreage under cultivation is 4·75 lakhs acres. More intensive method of cultivation will be carried out with the help of mechanised ploughing, the application of fertilizer, increased protection from flood damage and distribution of improved quality seeds. The main objective of the project is intensive cultivation of an expanded area with improved quality of paddy.

(b) *Groundnut Expansion Project.*—Groundnut is the crop for which considerable increase in production is possible. The present acreage under groundnut cultivation is about 13,886. The targets under the Plan are as below:—

TABLE 117.—*Groundnut Expansion Project*

Year		*Target Acreage*
1961-62	...	... 17,000
1962-63	...	... 25,000
1963-64	...	... 32,000
1964-65	...	... 40,000

In order that this work can be carried out as expeditiously as possible it will be necessary to obtain the help of the Agricultural and Rural Development Corporation and the Agriculture Department in procuring selected seeds as well as obtaining loans and advances and mechanized assistance.

(c) *Other Projects.*—The Plan also provides for expansion of jute, rubber, coffee, sugarcane and Virginia tobacco projects in the State.

(d) *Irrigation.*—Expansion of agricultural crops depends on irrigation facilities available in the region. The Plan includes the construction of a number of dams and drainage systems which are as below:—

TABLE 118.—*Irrigation Programme during the Plan Period*

Year	*Name of Project*	*Acreage to be benefited*
1961-62 ...	Hlaing dam and drainage system ...	13,500 acres
	Kale dam	3,000 „
1962-63 ...	Wetwon drainage system ...	4,000 „
1963-64 ...	Whay-Shan drainage system ...	1,000 „
	Modethadi drainage system ...	3,000 „
1964-65 ...	Daw-Lum drainage system ...	7,000 „
	Than-Pa-Ya drainage system ...	4,000 „
	Total ...	35,500 „

(e) *Farm Mechanisation Project.*—Farm mechanisation is an important project in the agricultural development of the region. Agricultural mechanical equipment and implements have been procured under the Japanese Reparation programme. The Plan also includes the procurement of spare parts, etc., and facilitities such as workshop, storage godowns, office, etc.

19. *Industry.*—Sugarcane and jute cultivation are expanding in the State. So as to give more incentive to cultivators a sugar mill and a small scale jute weaving mill will be constructed in the region. Construction of a paper mill and an integrated timber plant are also included under the Four-Year Plan.

20. *Pa-an Town Water Supply Project.*—The town of Pa-an, the capital of the Karen State with an estimated population of 30,000 has no proper water supply system. At present water is available from river and lakes. The main objective of the project is to develop a water supply that will provide for —

(*a*) Minimum standards of sanitation,
(*b*) Minimum standards of fire protection, and
(*c*) anticipated increase in population.

Studies have been made and it is found that the best source of water supply in that locality is from tube wells. Tube wells in that area can successfully supply clean, fresh and abundant water. Therefore under the Plan K 5·0 lakhs is provided for the development of water supply system in that area.

21. *Public Health.*—The Karen State Medical and Public Health Department continues in its efforts to provide, as far as possible, more effective medical aid to the urban as well as the rural population. But the number of hospitals available in the State falls far short of requirements. The Plan includes a programme for the construction and extension of eight number of hospitals at various district towns. The programme also includes procurement of medicine and modern type of medical equipment for the hospitals. The detailed construction programme is as below:—

TABLE 119.—*Hospital Construction Programme*

Locality	*Programme*
Pa-an	Extension of 50-bedded hospital to 150-bedded hospital.
Kawkareik	Extension of 25-bedded hospital to 50-bedded hospital.
Hlaingbwe	Construction of 25-bedded hospital.
Kya-in	Construction of 25-bedded hospital.
Papun	Construction of 50-bedded hospital.
Myawaddy	Construction of 25-bedded hospital.
Bawgali	Construction of 25-bedded hospital.
Shwegun	Construction of 25-bedded hospital.

22. *Education*.—The Karen State Government took necessary measures for the progress and advancement in education of its people. At present there are 4 High Schools, 24 Middle Schools and 258 Primary Schools in the State. Based on 1951 census estimates the population is 578,354 of which 10 per cent of the total population or 57,835 are children who are available to attend Primary Schools. At the rate of one school for 70 children at least 800 Primary Schools are required in that region. In view of the above-mentioned fact, the Plan provides for the construction of additional 245 Primary Schools, 8 Middle Schools, 4 High Schools and 4 Vocational Schools at various urban and rural areas.

The detailed programme is as below:—

TABLE 120.— *Construction of Various Types of Schools*

Year (1)	Number of Type of School			
	Primary School (2)	Middle School (3)	High School (4)	Vocational School (5)
1961-62	61	2	1	1
1962-63	61	2	1	1
1963-64	61	2	1	1
1964-65	62	2	1	1
Total ...	245	8	4	4

23. *Communication* (*Road Construction*).—The improvement and extension of the communication system in the State is of outstanding importance for the economic and social development of the region. The Plan includes the construction and improvement of a number of roads in the region.

24. *Construction*.—There has been an acute shortage of Government residential and office buildings as a result of war-damage and insurrection. The Four-Year Plan therefore provides for the construction of essential office buildings and residential quarters at various district towns of the Karen State. The construction programme also includes workshop, play-ground and gymnasium.

25. *Police*.—Expansion and improvement of Police force as well as constructional facilities such as Police Stations, Police Out-posts, etc., are also included under the Plan.

26. *Information*.—The Four-Year Plan also provides for procurement of necessary equipment for expanding the information services in the State.

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TABLE 121.—*Capital Expenditure Under Four-Year Plan*

(In K Lakhs)

Sr. No.	Name of Projects or Components (1)	1961-62 Total (2)	1961-62 F.E. (3)	1962-63 Total (4)	1962-63 F.E. (5)	1963-64 Total (6)	1963-64 F.E. (7)	1964-65 Total (8)	1964-65 F.E. (9)	Total Total (10)	Total F.E. (11)
	Karen State Government	**212·29**	**75·08**	**287·08**	**99·31**	**323·21**	**142·15**	**316·21**	**130·83**	**1,138·89**	**447·37**
1	Pa-an Town Water Supply	5·00	5·00	...	...	...	...	...	...	5·00	5·00
2	Public Health	2·00	1·00	...	...	...	...	...	...	2·00	1·00
3	Education	17·18	4·00	35·30	7·00	39·00	8·00	41·27	10·00	132·75	29·00
4	Medical	21·11	5·00	19·36	6·00	19·00	6·00	21·23	7·00	80·70	24·00
5	Construction	2·29	1·14	0·54	0·27	0·14	0·07	...	...	2·97	1·48
6	Communication	49·00	20·00	85·00	20·00	85·00	20·00	84·00	10·00	303·00	76·00
7	General Administration	4·25	2·12	2·60	1·30	1·78	0·39	2·30	1·15	10·93	5·46
8	Police	43·26	10·00	12·74	3·00	5·97	1·50	2·47	0·75	64·44	15.25
9	Information	1·67	1·04	0·94	0·56	1·05	0·66	1·01	0·63	4·67	2·89
10	Agriculture	32·78	17·00	28·68	17·00	26·91	17·00	26·55	17·00	114·92	68·00
11	Irrigation	3·29	...	2·21	...	1·55	...	2·06	...	9·11	...
12	Industry (Survey)	10·76	7·78	6·51	3·18	3·21	2·03	2·35	1·80	22·83	14·79
13	Agriculture Credit	17·70	...	22·70	...	22·70	...	26·47	...	89·57	...
14	Industry Development—										
	Sugar Mill Construction ... ... Paper Mill Construction ... ... Intergrated Timber Plant Construction	...	...	68·00	40·00	115·00	85·00	103·00	75·00	286·00	200·00
15	Mineral Development Loan	2·00	1·00	2·50	1·00	2·00	1·00	3·50	1·50	10.00	4·50

27. For the social and economic advancement of the State the following development programmes have been drawn up under the present Four-Year Plan.

28. *Agriculture and Irrigation.*—Kayah State comprises an area of 5,010 square miles or 3¼ million acres. Most of the area is hilly and mountainous with several large and small plains and valleys. The cultivated area in the State is approximately 85,000 acres or about 2½ per cent of the totalarea; of which 75 per cent of the cultivated land is grown with paddy. Yet the output of rice in the State is not sufficient even for its own consumption. Before the war, a good deal of paddy was cultivated in the valleys but owing to the destruction of canals during the war and by the insurgents after the war, much of the land is now idle. There is a strong potentiality of resources which indicates feasibility for expansion of cultivation of valuable crops such as paddy, groundnut, sesamum, corn, etc. However, development of new arable lands and expansion of cultivation in this region requires irrigation facilities and increased utilization of mechanised ploughing. Accordingly, the Four-Year Plan includes such programmes as construction and repairing of a number of dams, embankments, canals and tanks, procurement of farm machineries, and disbursement of agricultural loans to the cultivators. The major agricultural and irrigation works to be undertaken under the Four-Year Plan are as below:—

TABLE 122.—*Irrigation Projects*

Name of Projects	*Acreage to be benefited*
1. Meipha Chaung Project ...	10,000 acres
2. Linphonegyi and Dawlawkale Project	10,000 ,,
3. Ngwedaung Project	30,000 ,,

TABLE 123.—*Total estimated cost for the major Agricultural and Irrigation Projects*

Name of Projects	*Total Estimated Cost*
1. Meipha Chaung Irrigation Project ...	10·00 lakhs
2. Linphonegyi and Dawlawkale Project ...	4·20 ,,
3. Ngwedaung Irrigation Project ...	16·00 ,,
4. Procurement of 16 Tractors ...	5·60 ,,
5. Procurement of 6 numbers of Trucks ...	1·80 ,,
6. Other Farm Implements	1·50 ,,
7. Agricultural Loans	4·00 ,,
Total ...	43·10 ,,

In addition to the above-mentioned major agricultural and irrigation projects, a total of 27 minor projects such as digging of canals, diversion of streamlets, construction of tanks and embankments, etc., has been drawn up to be carried out for the community interest as well as agricultural purpose.

29. *Forestry.*—Forests are one of the valuable assets of the Kayah State. The Kayah Forest Division was notified as a Forest Division with effect from 14th May 1958. The Four-Year Plan includes programmes for introducing the practices of girdling of teak in the Kayah State forests and for increasing the production of hardwood and other forest products for which purposes a number of forest access roads and staff quarters will be constructed, and organization, improvement and extension of forests such as settlement and original demarcation, clearing of land for plantation, etc., will also be carried out during the planned period of four-years.

TABLE 124.—*Four-Year Targets for Girdling of Teak*

Year	*Number of Trees*
1961-62	1,000 trees
1962-63	1,500 ,,
1963-64	2,000 ,,
1964-65	2,000 ,,

TABLE 125.—*Four-Year Targets for Hardwood Extraction*

Year	*Tonnage*
1961-62	4,000
1962-63	5,000
1963-64	5,500
1964-65	6,000

TABLE 126.—*Four-Year Targets for Cutch Extraction*

Year	*Output of Cutch*
1961-62	20,000 viss
1962-63	22,000 ,,
1963-64	25,000 ,,
1964-65	25,000 ,,

30. *Industry.*—The Kayah State abounds in natural resources which if properly exploited can enhance the State's economy. Limestone, shale and gypsum are available in abundance in many parts of the State which can be used as raw materials in the production of cement. Surveys conducted in 1959 revealed rich occurrence of limestones and shales in the Lawpita area in the vicinity of the Baluchaung Hydro-electric Station. A great mass of gypsum has also been discovered in the two other areas. One of the advantages is the availability of Baluchaung Hydro-electric Power which can also be used as a fuel in the production of cement. The Cement Mill at Thayetmyo is now expanding its annual out-turn capicity from 60,000 tons to 180,000 tons of cement. However, with the rising demand for cement a medium size plant of 300 tons capacity daily would meet the country's requirements. Therefore, the Four-Year Plan provides for the construction of a cement mill with a capacity of 300 tons per day.

31. *Medical and Health.*—Medical facilities such as hospitals, dispensaries, urban and rural health centres, medical staff and supplies available to combat illness and diseases in the State fall far short of its requirements. The Government of the State have long felt that measures should be taken to provide its inhabitants with improved and wider medical amenities. Thus under the present Four-Year Plan the following programme has been laid down for construction of more hospitals and health centres in various localities within the State. The most significant part of this programme is the project to construct a modern one hundred-bedded hospital at Loikkaw, the capital of the State.

TABLE 127.—*Construction of Hospitals and Dispensaries*

Type of Building	*Location*
1961-62	
1. One six-bedded hospital	Bawlake.
2. One six-bedded hospital	Shadaw.
3. One six-bedded hospital	Hoyah.
4. One six-bedded hospital	Kekaw.
5. One Rural Health Centre	Mesi.
6. One Rural Health Centre	Loinanpha.
1962-63	
1. One six-bedded hospital	Ywathit.
2. One Rural Health Centre	Phasaung.
3. One Rural Health Centre	Dawta-Ma.
4. One Rural Health Centre	Lobakhu.
1963-64	
1. One six-bedded hospital	Mawchi.
2. One Rural Health Centre	Nan-phe.
3. One Rural Health Centre	Loilem.
4. One Rural Health Centre	Lawpita.
1964-65	
1. One hundred-bedded hospital	Loikkaw.

32. *Communication* (*Road Construction*).—The improvement and extension of communication system in the State is one of the most important projects for economic and social development of the region. Under the Four-Year Plan K 5·12 million is provided for the construction and improvement of five numbers of main roads consisting of Bawlake-Hawkhun-Ywathit road (28 miles), Loikaw-Shadaw road (30 miles), Pharuso-Hoya road (20 miles), Loikaw-Nam-me-Khon road (7½ miles) and Loikaw-Nowlawo road (6 miles).

33. *Loikaw Town Water Supply.*—The town of Loikaw, the capital of the Kayah State, with an estimated population of 7,200 has no public water supply system. At present water is being hauled from the Baluchaung, which flows through the town and from two lakes within the town limits. The possibility of locating light industries in the town and a marked increase in population are expected due to the availability of Hydro-electric power from Baluchaung Power Station. The objective of the project is to develop a water supply that will provide for—

(*a*) minimum standards of sanitation,
(*b*) minimum standards of fire protection, and
(*c*) anticipated increase in population and industry during next 20 years.

Under the Four-Year Plan K 19·61 lakhs is provided for the development of water supply that will provide for an increase of population up to 24,000 in the next twenty years. At the rate of 30 imperial gallons *per capita* per day, a total of 72,000 gallons per day are required. Studies have also been made of the water supply available at Limpohn springs, three miles north-west of the town limits.

34. *Education.*—In view of the fact that economic and social advancement of a State depends mostly upon education, the Kayah State Government will be undertaking the improvement and expansion of education system under the Four-Year Plan. Emphasis will be given to vocational training such as agriculture, animal-husbandry, health education, etc., in the rural area.

35. *Construction.*—The Four-Year Plan includes the construction of bazaar buildings at Loikaw with an estimated cost of K 5·00 lakhs.

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TABLE 128.—*Capital Expenditure Under Four-Year Plan*

(In K Lakhs)

Sr. No. (1)	Name of Projects or Components. (2)	1961-62		1962-63		1963-64		1964-65		Total	
		Total (3)	F.E. (4)	Total (5)	F.E. (6)	Total (7)	F.E. (8)	Total (9)	F.E. (10)	Total (11)	F.E. (12)
	Kayah State	**259·62**	**137·50**	**167·95**	**101·39**	**124·37**	**64·54**	**117·03**	**66·37**	**668·97**	**369·80**
1	Medical and Health	2·56	0·50	1·36	0·25	1·52	0·25	5·01	3·01	10·45	4·10
2	Forestry	2·55	...	1·12	...	1·08	...	1·15	...	5·90	...
3	Agriculture	6·35	4·62	4·59	2·20	3·51	1·87	2·68	1·10	17·13	9·79
4	Construction of Roads and Irrigation Works	40·69	18·65	35·82	12·91	30·65	11·43	35·40	11·09	142·56	54·08
5	Loikaw Town Water Supply ...	4·90	3·71	4·90	3·71	4·90	3·71	4·90	3·71	19·60	14·84
6	Construction of a Bazaar at Loikaw ...	2·38	1·50	0·88	...	0·88	...	0·88	...	5·02	1·50
7	Rural Water Supply	0·38	...	0·38	...	0·38	...	0·38	...	1·52	...
8	Education	24·73	6·40	5·46	...	5·56	...	5·65	...	41·40	6·40
9	Cement Factory	108·05	90·55	86·24	81·24	61·93	46·93	46·93	46·93	303·15	189·65
10	Industry and Mining	50·00	...	25·00	...	12·50	...	12·50	...	100·00	...
11	Communication	0·50	0·50	...	...	...	...	...	...	0·50	0·50
12	Transportation	9·30	9·30	...	...	...	...	...	...	9·30	9·30
13	Construction of Buildings	6·52	1·27	1·40	0·28	1·40	0·29	1·40	0·29	10·72	2·13
14	Information	0·71	0·50	0·80	0·80	0·06	0·06	0·15	0·15	1·72	1·51

36. *Agriculture and Irrigation.*—The total area of the State extends a little over 61,000 square miles or over 39 million acres, but the area cultivable is only 5·7 million acres of which about 1·7 million acres are cultivated annually. The physical resources indicate the possibilities of substantial expansion in the cultivation of groundnut, wheat, potato, soya beans, paddy, etc. Although the Shan State is rich in natural resources, the cultivators who live in this region still exist on a low level of subsistence economy. The development of their resources could raise the standard of living of cultivators and of the people of the Union as a whole. In order to make the maximum contribution towards the national income and to achieve the optimum utilization of the natural resources, it would be necessary to draw up a plan for the development of this region. The Plan includes crop expansion programme as well as more intensive cultivation of the existing area. For the successful implementation of the above projects, the Plan includes such other desirable efforts as the maintenance of price stability for the crops, distribution of good quality seeds, adoption of improved cultivation methods, increased use of fertilizers, direct loans and advance to the cultivators and assistance to be rendered by mechanised ploughing.

37. *Groundnut.*—The groundnut crop in the Shan State is important not only as a source of seed supply to Burma proper but also because of its capacity for further expansion. By increasing the production of groundnuts, the Shan State can contribute in a large measure towards the Union's self-sufficiency in edible oil. The target acreage of groundnut under the Plan are as below :—

TABLE 129.—*Target Acreage of Groundnut*

Year		*Acreage*
1961-62	...	75,000
1962-63	...	85,000
1963-64	...	94,000
1964-65	...	1,00,000

38. *Soya beans.*—Soya bean is cultivated successfully all over the Shan State and is a common article in the diet of hill's people. As soya bean is in great demand in the foreign markets, it is an important cash crop which can earn foreign exchange. The target acreage of soya beans under the Plan are as below :—

TABLE 130.—*Target Acreage of Soya Beans*

Year		*Acreage*
1961-62	...	18,000
1962-63	...	25,000
1963-64	...	27,500
1964-65	...	30,000

39. *Paddy Expansion Project.*—Paddy is the staple crop but the total produce is not sufficient for its entire population, hence a considerable amount has to be imported from Burma Proper. The import of rice from Burma Proper during the period from 1958 to 1960 was as below :—

TABLE 131.—*Import of Rice from Burma Proper*

Year		*Tonnage of rice*
1958 ...	...	14,522
1959 ...	...	31,256
1960 ...	...	33,537

It can be seen from the above table that rice import from Burma Proper is increasing from year to year. The possibility of expansion in the cultivation of paddy is great in that region. Therefore, the Plan includes the implementation of paddy expansion programme in the State with the objective of self-sufficiency for local consumption. This programme will be carried out with the help of the Agricultural and Rural Development Corporation.

40. *Other Crops.*—The crop expansion programme under the Plan also includes tea, coffee, oranges and other citrus fruits. The present acreage under these crops with their respective value of products are as below :—

TABLE 132.—*Crops ond Estimated Value of Products*

Name of crop		*Acreage*	*Estimated value of products*
1. Coffee	...	1,130	11·30 lakhs
2. Tea	...	71,525	190·77 „
3. Oranges	...	3,270	28·48 „

The expansion acreage of the crops in each year under the Plan is as below :—

TABLE 133.—*Expansion Acreage of Crops*

Year			Name of crops		
			Coffee	Tea	Oranges
1961-62	...	...	250 acres	625 acres	1,250 acres
1962-63	...	...	200 „	1,000 „	1,000 „
1963-64	...	...	200 „	1,000 „	1,500 „
1964-65	...	...	200 „	1,000 „	1,500 „
Total		...	850 „	3,625 „	5,250 „

41. *Irrigation.*—A great deal of paddy land could be brought under cultivation if the irrigation facilities could be improved. Accordingly, the Plan provides for the construction of a number of irrigation works consisting of Heho Valley, Namlet-chaung, Hsenwe (Se-U), Hsipaw and Momeik projects from which about 62,000 acres are expected to benefit.

42. *Forestry.*—The total area of forests in the State is 19,036 square miles, of which 3,163 square miles, or about 17 per cent is under reserved forests. The Plan includes programmes for afforestation works, soil conservation works and formation of grazing grounds in a systematic way. Apart from these activities, routine forest works such as girdling operation, extraction of teak and hardwood, forest road repair and organization improvement and extension of forests will also be carried out.

43. *Animal Husbandry.*—In this region, there is a general tendency to regard agriculture as consisting only of crop husbandry forgetting entirely the part played by livestock in agricultural production. Therefore the Plan includes the improvement and extension of poultry farming, pig rearing, milk-cow breeding in the region.

44. *Education.*—Development of education in the State is one of the most important factors for the advancement of economic and social development of the region. At present there are 20 High Schools, 44 Middle Schools and 446 Primary Schools in the State. The Plan provides for the construction of additional 40 Primary Schools at various urban and rural areas as well as the other constructional facilities such as office buildings, residential quarters, etc.

45. *Public Health.*—The medical facilities, buildings, personnel and supplies available in the State fall far short of requirements. The Plan envisages the construction of a number of hospitals, dispensaries, health centres and other constructional facilities such as office buildings and residential quarters.

The programme also includes procurement of medicines and modern type of medical equipment for these hospitals and dispensaries.

46. *Public Works and Roads.*—The Shan State P.W.D. is responsible for 2,400 miles of various types of State roads as well as about 850 miles of Union roads in the State. And all Government buildings in the State have also been maintained and well kept by this Department. The Plan provides for the improvement and development of communication and constructional facilities as well as town water supply system in four towns.

The improvement and extension of the communication system in the State is of outstanding importance to the region. The Plan provides for the improvement and construction of a number of roads including Mongsat-Mongpyat road (70 miles), Kengtung-Tarping road (50 miles), Kengtun-Mongyaung-Monyu road (64 miles), Kengtung-Monyang road (62 miles) and Monping-Pangyaung road (100 miles).

47. *Town Water Supply.*—The development of a water supply system is necessary in some of the district towns in the State for the provision of minimum standard of sanitation and fire protection. The Plan provides for construction of water supply systems at Kengtung, Lashio, Taunggyi and Kyaukme.

48. *Information.*—The Four-Year Plan provides for the construction of office buildings, etc., and procurement of vehicle, photographic materials and equipment for the extension of information services in the State.

49. *Police.*—The Plan includes the procurement programme of vehicles for transportation facilities of the police force in the region.

50. *Land Records Department.*—The procurement programme also includes motor vehicles for Land Records Department.

51. *Religious and Social Affairs.*—The Four-Year Plan includes programmes for the extension and development of religious and social affairs in the region.

SHAN STATE

TABLE 134.—*Capital Expenditure Under Four-Year Plan* (1961-62 to 1964-65)

(In K Lakhs)

Sr. No.	Name of Projects or Components. (1)	1961-62 Total (2)	1961-62 F.E. (3)	1962-63 Total (4)	1962-63 F.E. (5)	1963-64 Total (6)	1963-64 F.E. (7)	1964-65 Total (8)	1964-65 F.E. (9)	Total Total (10)	Total F.E. (11)
	Shan States Government	**238·33**	**61·19**	**139·55**	**33·53**	**126·98**	**20·98**	**100·32**	**13·50**	**605·18**	**129·20**
1	**Agriculture Project—**	**45·05**	**13·89**	**44·92**	**14·09**	**32·41**	**8·66**	**31·58**	**10·18**	**153·96**	**46·82**
	(*a*) Groundnut Project	12·75	...	10·50	...	10·05	...	8·70	...	42·00	...
	(*b*) Soya bean Project	3·30	...	4·80	...	1·25	...	1·25	...	10·60	...
	(*c*) Paddy Project	6·20	3·70	10·25	6·50	10·57	6·82	10·59	8·09	37·61	*a* 25·11
	(*d*) Tea, Coffee and Orange Project ...	7·58	...	6·15	...	6·15	...	6·15	...	26·03	...
	(*e*) Mechanization Project	9·59	*b* 6·50	11·11	*b* 6·50	2·45	*c* 0·75	2·95	*c* 1·00	26·10	*b* 14·75
	(*f*) Pest Control	4·33	3·69	1·73	1·09	1·73	1·09	1·73	1·09	9·52	*d* 6·96
	(*g*) Education Extension	1·30	...	0·33	...	0·21	...	0·21	...	2·10	...
2	**Forest Project**	**9·25**	...	**20·24**	...	**31·23**	...	**42·21**	...	**102·93**	...
3	**Survey**	**0·23**	...	**0·34**	...	**0·30**	...	**0·30**	...	**1·17**	...
4	**Education**	**16·12**	...	**11·92**	...	**11·83**	...	**11·25**	...	**51·12**	...
5	**Religious Affairs**	**1·14**	...	**0·63**	...	**0·63**	...	**0·64**	...	**3·04**	...
6	**Medical**	**13·25**	...	**7·60**	...	**7·17**	...	**3·50**	...	**31·52**	...
7	**Public Health**	**3·55**	...	**2·36**	...	**2·29**	...	**2·08**	...	**10·28**	...
8	**Police**	**70·48**	...	...	...	...	...	...	...	*e* **70·48**	...
9	**Land Records**	**1·96**	...	...	...	...	...	...	...	**1·96**	...
10	**Public Works**	**77·30**	**47·30**	**51·54**	**19·44**	**41·12**	**12·32**	**8·76**	**3·32**	**178·72**	**82·38**
	(*a*) Roads	48·00	25·00	24·00	6·00	26·00	7·00	6·00	2·00	104·00	40·00
	(*b*) Water Supplies	17·00	13·00	15·00	5·00	10·00	1·00	...	...	42·00	19·00
	(*c*) Mechanical Plants	7·30	5·30	5·54	3·74	3·12	2·23	0·76	0·32	16·72	11·68
	(*d*) Water Works	1·00	...	2·00	0·70	...	...	...	...	3·00	0·70
	(*e*) Bridge Materials (Rolled Steel Joints)	2·00	2·00	1·00	1·00	1·00	1·00	...	...	4·00	4·00
	(*f*) Bridge Materials (Hamilton Bridge)	2·00	2·00	4·00	3·00	1·00	1·00	2·00	1·00	9·00	7·00

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a Purchase of fertilizer and water pumps.
b Purchase of mechanical equipment.
c Purchase of spare parts.
d Purchase of pest control fumigants and equipment.
e Yearly expenditure breakdowns not available.

TABLE 135.—*Some Selected Goals of the Second Four-Year Plan*

—— (1)	1960-61 (2)	1961-62 (3)	1962-63 (4)	1963-64 (5)	1964-65 (6)
AGRICULTURE					
Sown Acreage (000 acres)					
Paddy	10,709	10,850	11,010	11,160	11,320
Groundnut	1,221	1,311	1,401	1,466	1,521
Cotton	373	423	495	595	720
Jute	40	58	75	93	110
Virginia Tobacco	8·0	9·3	10·7	12	12
Production (000 tons)					
Paddy	6,682	7,230	7,460	7,720	8,000
Groundnut	351	377	403	421	437
Cotton	12	14	17	22	28
Jute	4·0	5·5	8·1	10·8	18·4
Virginia Tobacco	1·4	2·2	2·6	2·9	2·9
FORESTRY—Production					
Teak (in cubic tons of round logs) ...	274,000	354,000	365,000	400,000	450,000
MINERALS—Production (tons)					
Tin ores and concentrates *	72	125	200	300	300
Mixed tin and tungsten *	276	325	400	500	500
Coal *	7,650	19,500	60,000	120,000	120,000
INDUSTRIAL PRODUCTION					
Cotton yarn (Spindles)	51,980	...	...	...	151,980
Cotton cloth (Power Looms)	4,083	...	...	...	10,083
Sugar (000 tons)	43	46	48	50	53
Cement (000 tons)	50	130	140	170	170
Brick (000 Nos.) †	12,500	14,820	15,812	15,812	20,812
Jute (million of bags)	12	14	17	20	23

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* M.R.D.C. only.
† Government Brick and Tile Factory only.

[English Translation]

GOVERNMENT OF THE UNION OF BURMA

MINISTRY OF NATIONAL PLANNING

NOTIFICATION

Dated Rangoon, the 28th July 1961.

No. **128**.—The following Order is published for general information.

DEVELOPMENT PROJECTS AND OPERATIONS SUPERVISION COMMISSION ORDER, 1961

I. SHORT TITLE AND DEFINITIONS

1. This Order may be called the Development Projects and Operations Supervision Commission Order, 1961.

2. In this Order—

(*a*) "Commission" means the Development Projects and Operations Supervision Commission constituted under paragraph 3 of this Order;

(*b*) "Boards and Corporations" mean all Boards, Corporations, Councils and other agencies constituted by order of the Government.

II. CONSTITUTION OF THE COMMISSION

3. (*a*) For the purpose of supervising the execution of development projects and the operations of Government Departments, and Boards and Corporations consituted by order of the Government, the Union Government hereby constitute a Commission, to be known as the Development Projects and Operations Supervision Commission.

(*b*) The Commission shall consist of the following Members and shall be responsible to the Cabinet:—

1. The Hon'ble Prime Minister (*Chairman*).
2. The Hon'ble Minister for National Planning (*Vice-Chairman*).
3. The Auditor-General.
4. The Financial Commissioner (Commerce).
5. The Financial Commissioner (Land and Rural Development).
6. The Chief Secretary to the Union Government.
7. The Secretary, Ministry of Finance and Revenue.
8. The Director, Commercial Audit Department.
9. The Executive Secretary of the Commission.

(*c*) The Secretary, Ministry of National Planning, shall be the Executive Secretary of the Commission.

(*d*) The Executive Secretary shall, subjct to the control of the Commission, exercise and discharge the duties, functions and powers of the Commission as may be delegated to him. Further, the officers and staff of the Ministry of National Planning shall function also as officers and staff of the Commission.

III. TERMS OF REFERENCE OF THE COMMISSION

4. The terms of reference of the Commission shall be as follows:—

(1) The Commission shall have power to examine whether the operations of Government Departments, or Boards and Corporations constituted by order of the Government, in the implementation or execution of development plans and projects, are consistent with the determined programmes or policies and the prescribed rules and orders.

(2) The Commission shall continuously watch and review the progress in implementation or execution of development projects, plans or operations; and shall suggest measures for progress and render assistance to the Department, Board or Corporation concerned with a view to overcome difficulties and problems which hinder progress. In this connection, the Commission shall exhort agencies concerned to accelerate progress and also issue directives as necessary.

(3) The Commission shall immediately bring to the notice of the authorities concerned, for action being taken under relevant rules and regulations, cases of negligence, wastage, inefficiency or misconduct relating to the implementation or operation of development projects or plans.

(4) The Commission shall examine the progress of development projects and operations on the basis of the annual work programmes and the forecasts of operations presented in the commercial budgets of the agencies concerned, and shall suggest measures or exhort agencies concerned to accelerate progress, and also issue directives as necessary.

(5) The Commission shall continuously watch and review the progress of operations relating to production and export on the basis of determined objectives and criteria, and shall suggest measures or exhort agencies concerned to accelerate progress, and also issue directives as necessary.

(6) The Commission shall, where necessary, suggest measures for improvement of the accounting systems of Boards and Corporations.

(7) In the exercise of the above-mentioned functions, the Commission shall have power to call for information, periodical or special reports and accounts from Government Departments, or Boards and Corporations concerned. In addition, the Commission shall have power to inspect mills, factories, offices, equipments or stores; to examine accounts; and also to call for consultation or otherwise, any person employed in such agencies.

(8) The Commission shall submit reports to the Government from time to time relating to matters under consideration of the Commission. In addition, a report on the general activities of the Commission shall also be submitted to the Government annually.

IV. GENERAL

5. In the exercise of its functions, the Commission shall have power to appoint Committees for inspection, study or enquiry, and also to delegate its powers to such Committees. Subject to the control of the Commission, the said Committees shall exercise the duties, functions and powers of the Commission as may be delegated to them.

6. This Order supersedes the Resolution dated the 25th June 1956 issued by the Prime Minister's Office relating to the establishment of the Standing Committee for Supervision and Co-ordination.

By order,
KHIN MAUNG GYI,
Secretary,
Ministry of National Planning,
Government of the Union of Burma.

[English Translation]

GOVERNMENT OF THE UNION OF BURMA

MINISTRY OF NATIONAL PLANNING

NOTIFICATION

Rangoon, the 28th July, 1961.

No. **129.**—The following Order is published for general information :—

NATIONAL PLANNING COMMISSION ORDER, 1961

I. SHORT TITLE AND DEFINITIONS

1. This Order may be called the National Planning Commission Order, 1961.

2. In this Order—

"Commission" means a National Planning Commission constituted under paragraph 3 of this Order.

"Committee" means a Committee of Advisers. Committee constituted under paragraph 5 (*a*).

II. CONSTITUTION OF THE COMMISSION

3. (*a*) For the purpose of evolving Economic and Social Development Plans and Projects and serving as an advisory authority on broad issues of economic and social policy, a Commission shall be constituted which shall be called the National Planning Commission.

(*b*) The Commission shall consist of the following members and shall be responsible directly to the Cabinet:—

1. The Hon'ble Minister for Finance and Revenue and National Planning (*Chairman*).
2. The Hon'ble Minister for Foreign Affairs and Shan States.
3. The Hon'ble Minister for Karen State.
4. The Hon'ble Minister for Kachin State.
5. The Hon'ble Minister for Kayah State.
6. The Hon'ble Minister for Chin Affairs.
7. The Hon'ble Minister for Industries, Mines and Labour.
8. The Hon'ble Minister for Agriculture and Forests.
9. The Hon'ble Minister for Trade Development.
10. Parliamentary Secretary, Defence Ministry.
11. Parliamentary Secretary, Ministry of National Planning.
12. Financial Commissioner (Commerce).
13. Chief Secretary.
14. Secretary, Council of Ministers.
15. Chairman, Union Bank.
16. Executive Secretary, National Planning Commission.

(*c*) The Secretary, Ministry of National Planning shall be the Executive Secretary of the Commission.

(*d*) The Executive Secretary shall, subject to the control of the Commission, exercise nd discharge the duties and functions of the Commission as may be delegated to him. The fficers and staff of the Ministry of National Planning shall function as the Officers and taff of the Commission.

III. Terms of Reference of the Commission

4. (*a*) It shall be the duties of the Commission to evolve the projects designed to develop he economy of Burma or to enhance social welfare and to advise the Government on broad ssues of economic and social policies.

(*b*) The Commission will exercise policy direction and review with respect to the ollowing functions. In addition, the Commission will review and decide upon such issues s may be placed before it:—

1. Initiate, stimulate and integrate economic, technical and social development plans.
2. In consultation with the Ministry of Finance and Revenue, explore and determine realistic levels of permissible development expenditures.
3. Examine plans and projects of Government agencies with regard to technical and economic feasibility and consistency with adopted overall objectives and criteria.
4. Continuously study projects under implementation as well as new projects, directing such revisions and modifications as from time to time may be necessary.
5. Supervise and co-ordinate the execution of overall development plans and operations.
6. Assign priorities for the allocation of funds required for the effective execution of overall development plans and operations.
7. Advise Government on broad issues of technical, economic, social and operating policy.
8. Subject to the control of the Cabinet, take such decisions and formulate such measures relating to broad social, economic and operating policies and practices as may be desirable, either on its own initiative or in relation to matters laid before it by other agencies of Government.
9. Encourage and assist the growth and development of planning and supervisory functions and the improvement of operating practices in other agencies of Government.
10. Exercise general responsibility for the conservation and useful exploitation of the physical and human resources of the nation.
11. Arrange for preparation of such reports and summaries of programmes, physical data, and technical information as may be necessary for the operation of the Government and the information of the public.
12. Shall submit reports and advice to Government from time to time in connection with the functions of the Commission. In addition, the Commission must submit to Government an Annual Report of all the work performed by it.

IV. Committee of Advisers

5. (*a*) To assist the Commission in the discharge of its duties, a Committee known as the " Committee of Advisers " and consist of the following is formed :—

1. Executive Secretary, N.P.C. (*Chairman*).
2. Secretary, Ministry of Finance and Revenue.

3. Secretary, Ministry of Industries.
4. Secretary, Ministry of Agriculture and Forests.
5. Secretary, Ministry of Trade Development.
6. A Representative of Defence Ministry.
7. General Manager, Union Bank.
8. *Thray Sithu* U Ba Khin, Director, Commercial Audit Department.
9. U Aye Hlaing, Professor, Economic Department, University of Rangoon.
10. Mr. Sundrum, Professor, Statistical Department, University of Rangoon.

(*b*) Functions of the Committee will be to process technical papers and to review reports submitted to the Commission on appropriate business of the Commission and generally advise and assist the Commission in the discharge of its duties.

(*c*) The Committee shall have the power to invite to its deliberations persons prominent in the fields related to its work.

V. GENERAL.

6. In connection with the discharge of its functions, the Commission shall have power to appoint Sub-Committees and to transfer functions to them. These Sub-Committees shall carry out the functions and exercise such powers as may be delegated by the Commission under the direction of the Commission.

7. Subject to the control of the Commission the Sub-Committee on Foreign Exchange Control will carry out its functions.

8. This Order supersedes the 1957, National Planning Commission Order published in the Prime Minister's Office, Ministry of National Planning. Notification No. 1, dated the 25th November 1957 and all subsequent amendments thereto.

By order,

KHIN MAUNG GYI,

Secretary,
Ministry of National Planning,
Government of the Union of Burma.

G.U.B.C.P.O.—No. 29, M of N.P., 24-8-61—3,000+1,000—Mono—VII.